National Conference & Seminar on

DYNAMICS OF GLOBAL BUSINESS ENVIRONMENT: ISSUES AND CHALLENGES

Seminar Proceeding & Book of Papers

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J.D. BIRLA INSTITUTE

Department of Commerce

Affiliated to Jadavpur University

Accredited with 'A' grade by NAAC (in 2010)

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National Conference on "Dynamics of Global Business Environment: Issues and Challenges"

31st August, 2017 & 1st September, 2017

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About
J.D. BIRLA INSTITUTE

J.D. Birla Institute, Kolkata is a private unaided College affiliated to Jadavpur University, Kolkata since 1963. It is conveniently located in the heart of the city at 11 Lower Rawdon Street, Kolkata-700020 (near Minto Park).

The late Sushila Devi Birla, wife of eminent industrialist late L. N. Birla established a college for girls in her mother-in-law's name in June 1962. The College was named Smt. Jawahari Devi Birla Institute of Home Science and it filled a much felt gap in the scientific education of young women from Calcutta's conservative families.

Over five decades, the Institute has grown with the needs and demands of the changing times. A Department of Commerce was added in 1997 and in tune with the shifting zeitgeist; another campus was started in 2002 to house the co-educational Department of Management. At this time, the name of the institution was simplified to J. D. Birla Institute. In the year 2009, four new professionally oriented under-graduate courses were introduced apart from two new post-graduate courses. Today, the Institute provides both graduate and post-graduate degrees. M.Com was introduced in 2013. Today, the Institute provides graduate and post graduate degree in commerce. Also the B.Com (Hons) course has been revised and upgraded this year. Currently the college has about 1800 students.

54 Years of Educational Excellence

AWARDED 'A' GRADE BY NAAC (IN 2010)

J.D Birla Institute has volunteered to obtain the National Assessment and Accreditation Council (NAAC) rating since 2004. During the recent re-accreditation procedure in2010, the NAAC peer team awarded the Institute with 'A' Grade (CGPA – 3.11), the highest possible grade, highlighting the Institute's constant quest for self-improvement and excellence.

Sponsoring
TRUST

As a private unaided educational institution, '**Vidya Mandir Society**', an educational trust managed by the S.K. Birla Group, sponsors the college.

Mr. S. K. Birla
Chairman,
Vidya Mandir Society

Mrs. Sumangala Birla
President,
Governing Body, JDBI

Ms. Rita Bibra
Secretary General,
Vidya Mandir Society

The J.D. BIRLA INSTITUTE ETHOS

An educational institution of distinction, J. D. Birla Institute (Departments of Sciences and Commerce) places high value on providing its students with fulfilling educational experiences in their chosen discipline and achieve their individual goals.

Our VISION

To establish ourself as a leading college providing higher education of higher standards with integrity, consistency and due diligence

Our MISSION

To prepare the future generation with academic excellence and practical skill-set needed to face global challenges and lead the country into the world of the future.

Our LOGO

The Institute's logo represents a well-known shloka from the Brhadarnyaka Upanishad *(Brhadaranyaka Upanishad – I.iii.28).*

"Asato ma sadgamaya
tamaso ma jyotirgamaya
mrtyorma amrtam gamaya"

Lead us from all that is untrue and unreal
to what is real and true.
Lead us from darkness to light, ignorance
to knowledge.
Lead us from death to immortality

Our OBJECTIVES

- To acquire knowledge and skills in the pursuit of academic excellence aimed at advancement into higher education, research and extension activities.
- To educate within a dynamic system structured towards varied professional and vocational applications for career design and development.
- To work proactively towards individual and group goals within an integrated setting of diverse socio-cultural members.
- To attain self-reliance through balance of freedom and discipline within the body, mind and spirit.

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PROGRAMME SCHEDULE

DAY-1: 31ST AUGUST, 2017

10.00 am to 11.10 am	:	**INAUGURAL SESSION**
10.00 am to 10.05 am	:	Greeting of the Chief Guest and other Dignitaries
10.05 am to 10.10 am	:	Lighting of Ceremonial Lamp
10.10 am to 10.20 am	:	Welcome Address by Ms. Rita Bibra, Secretary General, Vidya Mandir Society
10.20 am to 10.35 am	:	**Address by Chief Guest**, Shri. Harshavardhan Neotia Chairman, Ambuja Neotia Group, Kolkata
10.35 am to 10.55 am	:	Keynote Address
10.55 am to 11.00 am	:	Release of Book of Papers by the Chief Guest
11.00 am to 11.05 am	:	Vote of Thanks
11.05 am to 11.10 am	:	National Anthem
11.10 am to 11.30 am	:	**Tea**
11.30 am to 1.30 pm	:	TECHNICAL SESSION-1
		Risk Management in Financial Institutions Mr. Arup Chaudhuri Designation: Ex- Director of Amity University
		Corporate Governance: Scope and Opportunities Mr. Kaushik Mukherjee Company Secretary and Chief Legal Officer Philips Carbon Black Ltd.
		Financial Literacy and Inclusion Mr. Tapas Saha Founder and Managing Partner, International Institute of Research and Wealth Management
1:30 pm to 2:15 pm	:	**Lunch**
2:15 pm to 3:45 pm	:	TECHNICAL SESSION-2
		GST in India - Its Impact on Changing Dynamics of Global Business Environment CA Chiranjib Das Partner, Roy Chowdhury &Moitra, Chartered Accountants; Former, Joint Director & Head – Tax Research Department, The Institute of Cost Accountants of India; Empanelled GST Faculty, Indirect Taxation Committee, The Institute of Chartered Accountants of India
		Environmental Regulation and its Impact on Business Mr. Anupam Bhattacharyya Lead Auditor for Environment Management System (ISO 14001), Sr. EHS and Sustainability Consultant, ERM India Pvt. Ltd.
		Human Resource Planning for Software Projects Dr. R.K. Jana Professor, IIM-Raipur
3:45 pm to 4:00 pm	:	**Tea**

DATE-2: 1ST SEPTEMBER, 2017

8.30 am to 9.30 am	:	**Display of Posters – ROOM No. 403**
10:00 am to 11:15 am	:	**Paper Presentation: Session-1 (Marketing) - ROOM NO. 502**
		Paper Presentation: Session-3 (Finance) - ROOM NO. 503
11:15 am to 11:45 am	:	**Tea**
11:45 am to 1:00 pm	:	**Paper Presentation: Session-2 (HR) - ROOM NO. 502**
		Paper Presentation: Session-4 (Finance) - ROOM NO. 503
		Paper Presentation: Session-5 (Finance) - ROOM NO. 413
		Jury Assessing Posters - ROOM No. 403
12:45 pm to 1:30 pm	:	**Lunch**
1:30 pm to 2:00 pm	:	**Valedictory Session & Prize Distribution**

PROFILE OF RESOURCE PERSONS

CHIEF GUEST

Shri. Harshvardhan Neotia
Chairman,
Ambuja Neotia Group

Shri. Harshavardhan Neotia did his schooling in La Martiniere for Boys, Kolkata and obtained B.Com (Hons.) from St. Xavier's College, Kolkata. Subsequently he completed the Owner President Management Program (OPM) from the Harvard Business School, USA.

He is the Chairman of Ambuja Neotia Group. Operating through several companies, the Ambuja Neotia Group covers the entire spectrum of the Real Estate industry including Housing, Hospitality, Health Care and Education. Mr Neotia was conferred with 'Padma Shri' by the Hon'ble President of India in 1999 for his outstanding initiative in social housing. He was also honoured with YPO Legacy of Honour Award in 2005.

Mr. Neotia's other associations include being the Immediate Past President of FICCI, member of Society of Rajiv Gandhi Indian Institute of Management, Shillong, member of Board of Trustees, Indira Gandhi National Centre for the Arts, New Delhi, member of Governing Council of the India Design Council (IDC), Chairman of Board of Governors of National Institute of Technical Teachers' Training and Research (NITTTR), Kolkata, member of First Court of Tripura University, member of Chief Minister's Advisory Council, Government of Rajasthan, member of Chief Minister's Core Committee on Industry, Government of West Bengal, member of Board of Shree Somnath Trust, Gujarat, Chairman of Jnana Pravaha, Honorary Consul of Israel in West Bengal.

KEYNOTE SPEAKER

Mr. Naishadha Upadhyay
Associate Director &
Plant Manager (Global Position),
Pepsico Holding India Pvt. Ltd.

Mr. Naishadha Upadhyay is a Mechanical Engineer, currently based in Kolkata, with over 20 years of experience, out of which 10 years in Factory Manager Role across multiple geographies in India managing diverse teams across various Beverages, AlcoBev and Foods plants. Proficient in turning around & fix it assignments with demonstrated long term outcomes, implementation of best practices for efficient, productive, sustainable operation and building high performing teams. Established consistent performance to deliver statutory & regulatory compliance and instituting processes for sustenance.

PROFILE OF RESOURCE PERSONS

Mr. Arup Chaudhuri
Ex- Director of Amity University
Talk on Risk Management in Financial Institutions
arupsir@gmail.com

Prof. Arup Choudhuri is the founder Chairman and CEO of Acasia Global Consulting LLP. He is a consultant to the Department of Finance; Govt. of Dubai, United Arab Emirates. He is an Advisor to the Bangladesh Bank, the central bank of the nation. Prof Choudhuri provides training in Britain, Germany, Malaysia, Hong Kong, Sri Lanka, Bangladesh, Thailand and Singapore.

He is a senior Corporate Trainer in the field of Risk Management, Financial Control Banking and Entrepreneurship. Under his initiative and leadership Indian Institute of Contemporary Management Research (IICMR) was established last year. This institution provides serious research reports to government. Prof. Choudhuri has worked on projects funded by European Union ad ADB.

Prof. Choudhuri is a visiting faculty of St. Xavier's College (Autonomous), IMT, Gaziabad, University of Calcutta, IISWBM, East West University, Dhaka University, Bangladesh Institute of Bank Management and Bangladesh Bank Training Academy. He conducts special sessions with practicing Chartered Accountants under the aegis of ICAI. He is attached as an expert to West Bengal University of Technology, Agartala University (Tripura) and Dhaka University, Bangladesh. He had been the Director of Amity Global Business School, Kolkata and the Dean of IBS-Kolkata (Formerly known as ICFAI Business School)for a period of thirteen years.

He has undertaken different research projects in banks, insurance companies and financial institutions. Prof. Choudhuri is a prolific writer. He has edited two books namely "Environmental Accounting: The Emerging Issues" and "Chinese Banking". He has written more than seventy articles in Indian and international journals of repute. He is a part of the review team of several refereed journals.

Mr. Kaushik Mukherjee
Company Secretary and Chief Legal Officer, Philips Carbon Black Ltd.
Talk on Corporate Governance: Scope and Opportunities
kaushik.mukherjee@rp-sg.in

Mr. Kaushik Mukherjee, is Company Secretary and Chief Legal Officer of Phillips Carbon Black Limited, the largest manufacturer of carbon black in India and also the largest exporter of carbon black from India with an annual turnover of Rs 2800 crores. It is the first RPG (now RP-Sanjiv Goenka) Group of Companies to which CESC Limited, Spencers and Saregama belongs.

Mr. Mukherjee is also heading the indirect taxation and insurance department in Phillips Carbon Black Limited. Mr Mukherjee , a Xaverian and a national scholarship holder in B.Com (Hons.), is a member of the Institute of Chartered Accountants of India and also a member of the Institute of Company Secretaries of India.

Mr. Mukherjee is a regular faculty in the training orientation program conducted by the Institute of Company Secretaries of India, EIRC, Visiting faculty in the Institute of Chartered Accountants of India, EIRC, Adjunct Professor for Business Law for VGSOM, IIT, Kharagpur, International School of Business Management, Bhubaneswar, IMI, Kolkata, NUJS, Kolkata, Annex College of Management Studies, Kolkata, Narsee Moonjee Institute of Management Studies as faculty for distance learning, Management Institute of Durgapur. He is a regular writer in Taxmann's 'Corporate Professionals Today' and in Chartered Secretary journals.

PROFILE OF RESOURCE PERSONS

Mr. Tapas Saha
Founder and Managing Partner, International Institute of Research and Wealth Management
Talk on Financial Literacy and Inclusion
tapas@iirwm.com

Mr. Tapas Saha is the Founder and Managing partner of International Institute of Research and Wealth Management (IIRWM). He has over 12 years of experience in the field of Financial Planning & Wealth Management domain with diverse roles as a Professional, Academician, Mentor, Corporate Trainer, Consultant and Domain Expert & Entrepreneur.

His professional experience also includes being a faculty and acting academic head of International College of Financial Planning, Visiting Faculty at International College of Financial Planning and Executive – Accounts, Taxation & Investment at M/s. Murari Mohan Saha.

His other achievements are receiving 'Performance Appreciation' letter from Chief Mentor for Hard Work & Winning Attitude in December 2015 and December 2013, receiving "Employee of the Month" award in January 2013, receiving "Star Faculty" in the year 2010.

CA Chiranjib Das
Partner, Roy Chowdhury &Moitra, Chartered Accountants; Former, Joint Director & Head – Tax Research Department, The Institute of Cost Accountants of India; Empanelled GST Faculty, Indirect Taxation Committee, The Institute of Chartered Accountants of India. Talk on GST in India - Its Impact on Changing Dynamics of Global Business Environment
daschiranjib@yahoo.co.in

CA Chiranjib Das is presently a Practicing Chartered Accountant, providing advisory on Goods and Services Tax (GST) including its preparedness, business modelling, strategic issues with an objective to leverage gains from GST for its esteemed stakeholders. He is a partner at Roy Chowdhury & Moitra, Chartered Accountants, Kolkata. He is an empanelled GST Trainer of the Indirect Taxation Committee, The Institute of Chartered Accountants of India, a Fellow Member of the Institute of Cost Accountants of India and a Masters of Commerce, University of Calcutta. He is pursuing his Ph.D on "Impact of Ind-AS on Cost Structure & Taxation". He has participated in about 200 sessions on GST & delivered lectures, conducted sessions, conducted about 70 Workshops on GST for Tax Professionals, Members, Revenue Officials and Corporate (covering both Manufacturing and Service Sectors) and has conducted over 150 seminars for students on GST.

Mr. Das is the Former Joint Director and Head of Tax Research Department, The Institute of Cost Accountants of India and had served as Secretary to the Taxation Committee during the period 2009-2016 and the first Secretary to the GST Advisory Board, The Institute of Cost Accountants of India. He has designed & developed a GST software, 'GeSTure' which will facilitate in meeting GST compliance including preparation of GST returns & financial accounting.

Mr. Chiranjib Das is very well respected as a great team man and a Leader, who shoulders all responsibilities but delegates authority amongst his juniors to make them grow and excel further.

PROFILE OF RESOURCE PERSONS

Mr. Anupam Bhattacharyya
Lead Auditor for Environment Management System (ISO 14001), Sr. EHS and Sustainability Consultant, ERM India Pvt. Ltd.
Talk on Environmental Regulation and its Impact on Business
anupambhattacharyya85@gmail.com

Mr. Anupam Bhattacharya is the Senior Consultant; ERM India Private Limited; Kolkata. He is done M.Sc in Environmental Science from Vidyasagar University, MBA in Environment Management, IISWBM, Kolkata, MBA in Fire Protection and Safety Management, Advanced Diploma in Chemical Plant Processing, Safety & Management, BSS, Government of India, Diploma in Industrial Safety, National Institute of Labour Education and Management and NEBOSH IGC in Occupational Health and Safety. He is an IRCA Certified Lead Auditor for ISO 14001:2015 and has obtained GRI G4 Certification from GRI.

Mr. Bhattacharya has demonstrated strong expertise of conducting EHS, Labour Compliance and Management System audits and assessments and has conducted over 125 such assignments in South East Asia. He has also conducted Assurance Audit on sustainability KPIs, GHG foot-printing as per AA 1000 and ISAE 3000 across sectors, Phase- I Environmental Site Assessment and Environment Social Due Diligence. He bears strong expertise in development, implementation and maintenance of Management system as per ISO 14000, OHSAS 18001 SA 8000, ISO 26000, ISO 9000, IFC Performance Standards and has worked on over 20 such assignments in India, Bangladesh across sectors.

He has contributed meaningfully in developing Sustainability Framework including materiality assessment, developing Management standard, Guidance note, drafting Sustainability Reports in accordance with GRI. He has strong experience in delivery of trainings and workshops on various elements of EHS Management - such as risk assessment, EHS and labor regulatory requirements, activity specific training, implementation of EHS Management system etc. and Sustainability across sectors.

Dr. R.K. Jana
Professor, IIM-Raipur
Talk on Human Resource Planning for Software Projects
rkjana@iimraipur.ac.in

Dr. R. K. Jana is the Professor of Decision Science and Systems Area at Indian Institute of Management, Raipur, India. He has obtained his PhD from IIT Kharagpur. He has received postdoctoral research fellowships from George Mason University, USA and National University of Singapore. He is the recipient of prestigious DST Young Scientist Research Project from DST, Government of India.

Prior to joining IIM Raipur, Dr. Jana has served BITS, Pilani and Indian Institute of Social Welfare & Business Management, Kolkata. He was also a visiting professor at Indian Institute of Foreign Trade, Kolkata. His research interest includes optimization, artificial intelligence techniques, and business decision making. He has published more than 40 papers as journal articles, book chapters, and referred conference proceedings. So far, he has won three best paper awards from international conferences held in India and USA. He is a senior member of Operational Research Society of India, a member of Decision Sciences Institute, USA, and Indian Statistical Institute, Kolkata.

PAPER PRESENTATIONS (ORAL)

PAPER PRESENTATIONS (POSTER)

ORAL PRESENTATION-1

Customer Relationship Management in Banking Sector – Based on Cloud Computing: a New Era in Global Banking System

Sreetama Ghosh

Assistant Professor, Sivanath Sastri College, Kolkata-700029

Abstract: Over the last few decades, technical evolution has highly affected the banking industry. Since the 1980's, things have been really changing with the advent of multiple technologies and applications. Nowadays customer requirements and customer behavior have changed considerably. To support these needs, and to gain competitive advantage customer centric strategies must be used. Customer relationship management is one of these strategies. More recently Cloud based Customer Relationship Management provides valuable flexibility for business, in addition to perform all the functions of traditional CRM system. Cloud Computing technology is an IT service delivery model that presents computing services to customers based on their request through network. Resources can be shared dynamically in any scale by using cloud computing. For banks, the value propositions for Cloud Computing affects the entire business. Cloud technology offers a new model for delivering innovative client experiences, effective collaboration, improved speed to market and increased IT efficiency. Indian banking industry has faced numerous challenges such as increasing competition, pressure on spreads and systematic changes to align with international standards which have necessitated a re-evaluation of strategies & processes in order to remain competitive in this dynamic environment. Due care will have to be made while embracing technology and transforming traditional touch points to electronic ones, so that human touch with customer is also not lost.

Keywords: Banking Sector, Cloud Computing, CRM, IT-Efficiency

Introduction

Over the last few decades, technical evolution has highly affected the banking industry. Since the 1980's, things have been really changing with the advent of multiple technologies and applications. Nowadays customer requirements and customer behavior have changed considerably. To support these needs, and to gain competitive advantage customer centric strategies must be used. Customer relationship management is one of these strategies. More recently Cloud based Customer Relationship Management provides valuable flexibility for business, in addition to perform all the functions of traditional CRM system. Cloud Computing technology is an IT service delivery model that presents computing services to customers based on their request through network. Resources can be shared dynamically in any scale by using cloud computing. For banks, the value propositions for Cloud Computing affects the entire business. Cloud technology offers a new model for delivering innovative client experiences, effective collaboration, improved speed to market and increased IT efficiency. Indian banking industry has faced numerous challenges such as increasing competition, pressure on spreads and systematic changes to align with international standards which have necessitated a re-evaluation of strategies & processes in order to remain competitive in this dynamic environment. Due care will have to be made while embracing technology and transforming traditional touch points to electronic ones, so that human touch with customer is also not lost.

Objectives of Study

The main objectives of the study are to examine the importance of CRM in banking sector and its impact on the customer satisfaction with a special reference to Cloud Computing. It also specify the different aspects of Cloud Computing and the impact of Cloud Computing in banking sector in coming years. The other specific objectives of the study are:

- To analyze the perception of CRM as a tool of banking sector in retention of customer in general.
- To review the literature on the concepts and use of Cloud Computing in banking CRM.
- To offer pertinent suggestions based on the findings of the study.

Methodology

'Research Methodology is a systematized effort to gain new knowledge.' It is a focused identification for search of new facts in any branch of knowledge.
In this study comparison is done on the view of the customer about CRM awareness, use, level of technology and quality of service offered by the banks. The study also concentrate towards the opinion of the bank managers about application and implementation of Cloud Computing on their working areas. Secondary data is collected from different published and unpublished sources. Thus this study is a mixed study.

Results & Discussion

General Consideration on CRM

The expression Customer Relationship Management has been in use since 1990s. CRM is abbreviation of Customer Relationship Management which is a comprehensive & systematic solution that plays a significant role in organizations by integrating the principles of customer relationship to acquire, develop and maintain customer satisfaction, increase profitability and create value added economy. General perception about CRM is that it stores & maintains the information of customer but in true sense it is only a part of work done by CRM. Actually CRM is composed of three main parts: Customer, Relationship & Management.

CRM as pillar of Banking Marketing

Banking industry in recent years is facing strong competition and thus gaining customer satisfaction is very important. In the current competitive world the aim of banking marketing strategy is not only to find the best customers, but also to build the long term collaboration with them to optimize customer satisfaction. The use of CRM in banking marketing as a tool of coordination and development emphasizes the relationship with customer. The models that banks have used to implement CRM are multiple and diversified. The basis of CRM implementation on the banking sector is segmentation, information network, algorithm, IT system and sales & customer support. Some of the advantages that the banks obtain by using CRM are as follows:

- Helping the banks to make effective relationship with customers.
- Providing competitive advantages
- Increasing productivity and customer loyalty
- Increasing the speed of banking operations
- Reducing the waiting time for customer to get the service.

Cloud Based CRM

Cloud CRM or CRM cloud means any customer relationship management technology where the CRM software, CRM tools and the organisation's customer data resides in the cloud and it is delivered to the end-users via internet. Cloud based CRM provides valuable flexibility for business in addition to perform all the functions of traditional CRM system. All hardware and software required to support cloud based CRM are placed and monitored by third party service providers. In general, the benefits of Cloud based CRM are as follows:

- Easy access to remote data
- Easy deployment of service
- Affordability of service

Cloud Based Banking CRM

A bank may have many reasons for moving to the Cloud, but the primary reason is application. The main hurdle while investing in a new technology is capital expenditure which is required for the new infrastructure. The most important benefit of opting for Clouds is CAPEX (capital expenditure) and OPEX (operating expenditure) comes down to a large extent. This is because the banks which use Cloud based banking CRM system, don't need to buy a CRM program and install it on every computer in bank and also they don't need to update them. Instead of all these banks only must connect to the cloud and use user interface easily. Thus with Cloud Computing, financial institutions only have to budget for operational expenses and pay for the services they use. So it is evident that by using Cloud based banking CRM, banks can manage their data more efficiently and thus they will be able to offer friendlier customer service to their customers.

Meaning & Characteristics of Cloud Computing

As defined by National Institute of Standards & Technology (NIST)- Cloud Computing is a model for enabling ubiquitous, convenient, on-demand network access to a shared pool of configurable computing resources like networks, servers etc. It is one of the fastest growing technologies in the coming years. Cloud model describes five essential characteristics:

- On demand self-service and usage based billing
- Broad network access
- Resource pooling
- Rapid elasticity and business agility
- Measured services.

An organization can procure the resources and applications through internet from the main technological centre which is shared by the other organization also. If required they can be managed by a third party vendor, known as Cloud Brokers.

Cloud Deployment Models

There are five ways service providers most commonly deploy Clouds:

- Public Cloud which is available to any paying customer
- Private Cloud is operated solely for an organization
- Community Cloud is shared by several organizations
- Hybrid Cloud is a composition of two or more Clouds
- Virtual Private Cloud is a Public Cloud in which a Private Cloud is created

Cloud Service Models

After selecting the deployment model the next step is to choose from different service models. The different service models which are available are as follows:

- **Business Process-as-a-Service (BPaaS)**: The Cloud is used for standard business process such as billing, payroll or human resources. BPaaS combines all the other service models with process expertise.
- **Infrastructure- as-a-Service (IaaS)**: Instead of purchasing servers, software, data center space or network equipment, this Cloud model allows business to buy those resources as a fully outsource service.
- **Platform- as-a-Service (PaaS)**: Here the customer can deploy their own application and tools instead of purchasing and managing the hardware and software. This results in a reduction of the cost.

- **Software -as-a-Service (SaaS)**: This service is most suitable for those who want to spend less and reap more benefits. The consumers can access to more sophisticated and expensive software through internet on their own in –house installed computers.

Mode of Payment

For payment to the Cloud service providers, one can choose from the different options provided in the payment model i.e. either payment can be done on subscription basis, or 'pay as you go' option or 'reserved capacity contracts'. Some Cloud providers even provide free Cloud services but derive the revenue through advertisements hosted in their Clouds.

Auditing in Clouds

Auditing policies and practices require adjustments in order to adapt with the Cloud environment. Auditors must be adequately trained as specialized knowledge is needed to evaluate the shared environments and virtualized technologies. So right from the conception stage of Cloud Computing the auditors need to examine the following for reviewing a Cloud Computing project:

- Critical and non-critical applications need to be segregated before sending them to the cloud.
- A careful study of country/regional regulations that affect the organisation's business should be studied.
- Cloud users experience with service level agreement (SLA) and vendor management should be examined.
- Assessment of the value and risk of the information stored in the Cloud should be done.
- Review of the disaster recovery measures and the back-up facility adopted by the service providers in the Cloud infrastructure should be done periodically.
- Check on the integrity of the authorized person responsible for the security of the data.

Apart from above mentioned auditing procedures the auditors can also perform advisory functions. They can help the organization in deciding whether to procure or install a Cloud system in-house by comparing the risk and cost of the installation.

Advantages of Cloud based CRM in Banking Sector

- **Hassel-free Installation**: Modern Cloud based CRM is ' ÍT worry –free '. The main requirement is internet connection and the user will sign in online and use it. Installation, data migration or upgrades are done remotely.
- **Cost Savings & Usage-based Billing: With Cloud Computing, there is no need for heavy investments in new hardware** & software. Unique nature of Cloud Computing allows banks to pick and choose the services required on a pay-as-you-go basis.
- **Seamless Access**: Cloud CRM gives round the clock accessibility. The system can be accessed from anywhere and on any device.

- **Business Agility & Focus**: The flexibility of Cloud based operating models lets the institutions experience shorter development cycles for new products. This supports a faster and more efficient response to the needs of banking customers.
- **Green IT**: Organizations can use Cloud Computing to transfer their services to virtual environment that reduces the energy consumption and carbon footprint that comes from setting up a physical infrastructure. It also leads to more efficient utilization of computing power and less idle time.
- **Leverages**: Due to deployment of Cloud as business model, a large amount is saved in the initial investment for the acquisition of IT related business infrastructure and its associated business expenditure. This leads to maximization of the leverage of the initial capital invested and minimization of the risk involved with it.
- **Payment Option**: As per convenience, the consumer can opt for either monthly billing scheme or usage billing scheme. Instead of opting 'pay-as-you-go' scheme helps in the improvement of the cash flow.
- **Sharing Information**: The clients are allowed the access to their financial information and generate the requisite reports hosted by their accountants in the Clouds. Any voluminous files or data information can be transferred within the organization or even to outsiders in very speedy manner.
- **Offers Security**: The Cloud providers provides virus and firewall protection to prevent hackers and intruders. Even the data is encrypted which are unreadable without any encryption key. Due to multi-level redundancy, data is stored in more than one location to retrieve it as and when required.
- **Proper Backups**: As commonly known as online backup, wherein the data is sent from the Cloud to an off-site server usually hosted by a third party to keep a proper back-up of the data. The fee of the third party service providers is charged as per the capacity, bandwidth or number of users.
- **Ease of Use**: Cloud CRM is easy to use. Once the software package is purchased at a fixed monthly price, the user is only required to login with the access code.
- **Stronger Client Relationship**: The combination of big data and potentially unlimited computing power will allow banks to develop systems capable of providing better insight into clients and make better decisions on their behalf. Service Cloud becomes more customized.

Risk Associated with Cloud Computing & Steps to Avoid the Flaws of Cloud Computing

Associated Risk: Although Cloud carries huge benefits, the various risk associated with it cannot be ignored:

- **Security of Data**: The most crucial concern is about the security of the data available in the Cloud. Since they are hosted, appropriate measures need to be taken for its encryption. Different security standards and models put a question mark on the responsibility of the security breach.
- **Privacy & Integrity**: The privacy and integrity of data depends on the faithfulness of the Cloud service providers. The sensitiveness of the data may also be affected by the negligence of the provider.
- **Vendor Failure**: Vendor failure is a major concern. During the peak time, there can be server-down issues leading to the failure of timely delivery of important information.
- **Security & Regulatory Compliance**: Security and regulations are major barriers to Cloud adoption. Depending on the degree of security required, banks can choose from three cloud models: Public, Private & Hybrid. Banks are governed by national and continental regulations and need to satisfy regulator's mandate of data availability, confidentiality and integrity. Cloud solutions vary in the benefits and the degree of security they offer, requiring banks to identify the right procurement strategy based on the models available and the associated benefits.
- **Cost Consideration**: While an on premise dedicated Private Cloud offering goes a long way in mitigating the security concerns of banks, this solution can be expensive due to the need

for customization. Tailoring a solution to incorporate the organizational culture, features and the level of automation required to meet the organization's service management process, is cost-intensive.

- **Technical Limitations**: Cloud solutions may lack the technical capability to host specific applications requiring niche software packages and capability driven architecture. Banks need to identify such exceptions while building the overall business case.

Steps to Avoid Flaws

- Cloud can be used for non-private data and sensitive data can be stored in an in-house server.
- While using database as service, encryption can be used.
- For proper administration, the network connections should be secured.
- Instead of one Cloud service provider, multi-location/multi-country services can be opted.
- Auditing of key entry points should be done.
- A comprehensive data inventory with suitable classification of data should be implemented.
- Access to the customer data should be restricted through effective identity.
- The organization must assure from the Cloud service providers that non-public personal information (NPPI) are removed from all locations after the termination of contract.
- Cyber Insurance policies in compatible with the service provider contract can also be taken as an added protective measure in case of system failures in the Cloud.

Current State of Cloud Adoption in Banking Industry

Abandoning traditional banking methods now the banking sector is making a new turn, Cloud Computing technology in banking sector is also on the rise. Previously it was reluctant to readily embrace innovations in India, but after the awareness and elucidation of related myths, it has been seen that Cloud is becoming favorite amongst banking industry.

Banks have typically adopted both Public and Private Cloud Computing solutions to standardize and rationalize their IT landscape; reduce cost and shorten the time to market. However large banks typically opt for Private Cloud solutions with an on-premise data center and dedicated technology to ensure data security as well as regulatory compliance.

However banking organizations and financial sectors as a whole has been relatively slow in adopting the Cloud. The strategy has been to wait and watch on how the Cloud performs from both security as well as robustness of infrastructure point of view. This is mainly because Cloud Computing is a pervasive term encompassing several different aspects and lack of understanding of various nuances has resulted in banks achieving only a limited degree of success in the Cloud programs. A failure to map the benefits anticipated from the target state to specific elements of Cloud strategy coupled with a hazy understanding of the Cloud Computing paradigm has resulted in overblown expectations. Banks have failed to comprehend or evaluate their core requirements or the specific issues that need to be addressed, and translate them into an appropriate Cloud solution, resulting in project failure and lower ROI. As a result, Cloud adoption in banks has not always yielded the desired benefits. Clearly the success of Cloud Computing programs depends on a clear understanding of the various elements of the solution and the corresponding benefits.

Conclusion

When planning Cloud Computing initiatives in the near future, banking institutions should choose service and delivery models that best match their requirements for operational flexibility, cost savings and pay-as-you-use models. Banks should adopt a gradual evolutionary approach towards Cloud Computing services, evaluating each project based on the type of applications and nature of the data.

In long-term it is expected that banks will have an application portfolio mix of on-premise and Cloud based services delivered across a combination of Private, Public & Hybrid Cloud based deployment models with the share of Cloud services gradually increasing in the service mix. Private Clouds are expected to increasingly become the deployment model for Cloud services among banks, giving financial institutions full control through ownership and operations of their Cloud system.

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ORAL PRESENTATION-2

Factors Affecting Consumer Buying Behaviour of Health Insurance: A Study with respect to Kolkata

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Abstract: This paper deals with the issue of Indian consumer perception towards health insurance. Despite the dynamic global changes in the insurance sector, the health insurance sector is still developing in India, most of the people are unaware of the advantage it has during the time of need. The paper focuses on the awareness level and decision making factors while choosing their health insurance policy. Due to globalization Indian market is no more dominated by LIC and other government corporation; lots of private players are there who are challenging the dominance of these players. Since there are lot of companies in the market, consumers spending pattern has also changed which has been analyzed in the paper. In this study an attempt has been made to find the factors which drive the customer to take up health insurance as well as the reasons for not taking it up.

Key Words: Awareness Level, Consumer Perception, Health Insurance, Spending Pattern

Introduction

The concept of Health Insurance was proposed in the year 1694 by Hugh the elder Chamberlin from Peter Chamberlin family. In 19th Century "Accident Assurance" began to be available which operated much like modern disability insurance. This payment model continued until the start of 20th century. During the middle to late 20th century traditional disability insurance evolved in to modern health insurance programmes. Today, most comprehensive health insurance programmes cover the cost of routine, preventive and emergency health care procedures.

Healthcare in India is in a state of enormous transition: increased income and health consciousness among the majority of the classes, price liberalization, reduction in bureaucracy, and the introduction of private healthcare financing drive the change.
Over the last 50 years, India has achieved a lot in terms of health insurance. Before independence, the health structure was in dismal condition i.e. high morbidity and high mortality and prevalence of infectious diseases. Since independence, emphasis has been put on primary health care and considerable progress has been made in improving the health status of the country. But still, India is way behind many fast developing countries such as China, Vietnam and Sri Lanka in health indicators.

Health Insurance is more complex than other segments of insurance business because of serious conflicts arising out of adverse selection, moral hazard, unavailability of data and information gap problems. Health sector policy formulation, assessment and implementation are an extremely complex task, especially, in changing epidemiological, institutional, technological and political scenario. Proper understanding of Indian Health situation and application of principles of insurance, keeping in view the social realities and national objectives, are important.

People face lots of hardship in Private Health Care Centre. Apart from high hospitalization charges, doctor's fees, nursing cost etc., unwarranted procedures and diagnostic tests put extra burden and cause increased morbidity and mortality. In Private, there are unnecessary medical tests. Even there is over billing. There is no transparency in Private Health Care Sector. For example, a person suffering from muscular chest pain does not require angiography still many hospitals routinely put some patients through this procedure.

There are no guidelines for treating conditions like heart attack, stroke, diabetes, osteoporosis, cancer. Health care cost in Private is soaring and it will continue to grow indefinitely. With our present hectic lifestyle, pollution and stress, suffering from health problem is on rise. Health insurance reduces the financial impact as well as the mental stress associated with an illness. Therefore, people are inclining in health insurance. Health insurance is a form of insurance which covers the expenses one incurs in case of hospitalization. It covers doctor's fees, diagnostic tests, surgical operations, pre and post hospitalization expenses etc.

Health insurance is insurance against the risk of incurring medical expenses among individuals. By estimating the overall risk of health care expenses among a targeted group, an insurer can develop a routine finance structure, such as a monthly premium or payroll tax, to ensure that money is available to pay for the health care benefits specified in the insurance agreement. The benefit is administered by a central organization such as a government agency, private business, or not-for-profit entity.

A health insurance policy is a contract between an insurance provider (an insurance company or a government) and an individual or his/her sponsor in which the insurer agrees to provide specified health insurance at an agreed-upon price called the premium. The contract can be renewable (annually, monthly) or lifelong in the case of private insurance, or be mandatory for all citizens in the case of national plans. The type and amount of health care costs that will be covered by the health insurance provider are specified in writing, in a member contract or "Evidence of Coverage" booklet for private insurance, or in a national health policy for public insurance.

Medical Insurance Plan is an insurance contract made by a general insurance company that takes care of medical expenses following hospitalization of the insured in case of sudden illness, an accident or any surgery required, for a disease that may arise during the policy period. An additional benefit of medical insurance plans is that the insured also becomes eligible for comprehensive preventive medical checkups.

When invested in a medical coverage plan, there are two different ways to apply for the benefit in case of an emergency. One can either access cashless facility i.e. in this case the bills are directly paid by the insurance company to the hospital (but there is a catch, the hospital must be registered with the insurance service provider.) or one can pay the bills in the hospital and get a reimbursement afterwards by submitting the same to the insurance company.

Yilma, Mebratie, Sparrow, Abebaw, Dekker Alemu & Bedi (2014) attempted to analyze the overall performance of Life Insurance Industry of India between pre- and post-economic reform era. To measure the current status, volume of competitions and challenges faced by the Life Insurance Corporation of India. It was found that the total business of LIC have an increasing trend. The collected and analyzed data prove that the Liberalization, Privatization and Globalization (LPG) is incorporating a positive influence on LIC of India and its performance. It indicates the increasing competition from private sector. ICICI prudential is becoming a stronger and stronger player by taking over a lot of business of LIC due to aggressive and flexible product range. But still there is a lot of scope of development in the life insurance industry where private sector will be a challenge in the front of LIC.

Anita (2008) analyzed the Indian health insurance market and different forms of policies available in the market. It also compared the Indian market with other international market.
Rao (2000) analyzed that India is still an underdeveloped insurance market, it has a huge catch-up potential. According to him even though there is strong potential for expansion of insurance into rural areas, growth has so far remained slow. Considering that the bulk of the Indian population still resides in rural areas, it is imperative that the insurance industry's development should not miss this vast sector of the population.

Dobrow, Goel and Upshur (2004), reviewed that private insurance companies had reason to celebrate with the lifting of the scrotal cap in the insurance sector to 49 per cent in the Union Budget 2004-05, as against 26 per cent earlier.

Objectives of the Study

- To assess the awareness of people regarding Health Insurance.
- To understand the spending pattern of individuals in Health Insurance.
- To identify the factors affecting the consumers buying behavior of Health Insurance policy.

Methodology

- The study is based on primary data collected through a structured questionnaire covering a sample of 100 individuals.
- The data is collected from the IT returns for the Assessment year 2015-16 from a Chartered Accountant firm and by individually contacting them, due permission from the firm authority has been taken.
- For the final analysis simple charts and tables are used, different statistical method like correlation and Principal component analysis.

The analysis and findings have been conducted by interviewing 100 people with structured questionnaire, out of which 85 people have taxable income, while 15 people have non-taxable income.

Results & Discussion

The analysis of the structured questionnaire provides the following findings.

Awareness Level of Health Insurance Policy

- 92 people said that they knew about Medical Insurance and were aware of it. 8 people were unaware and did not know about Medical Insurance.
- The respondents who have taxable income, 47 said that they have a Medical Insurance, while 38 said that they did not have a medical insurance.
- The respondents who have non-taxable income, 3 have a Medical Insurance while 12 did not have a medical insurance.
- Out of 50 respondents, 38 invest in the health insurance get deduction under section 80D of the Income Tax Act and rest 12 are covered by service and not get any deduction under section 80D of the Income Tax Act.
- Out of the 47 respondents having taxable income and also have Health Insurance, 19 have it for themselves, 8 have insured themselves along with their spouse; 16 choose it for their family and 4 have insured their family and their parents.
- Out of the 38 respondents (36 have taxable income and 2 don’t have taxable income), 19 people said that they consider Medical Insurance as a tax saving tool as well as a social security measure. They stated that they are obliged to get social security for themselves as well as their family members to meet medical exigencies. They also enjoy the tax benefit that they receive on payment of Medical Insurance Premium. 14 people said that they consider Medical Insurance as a social security measure to protect their family from unforeseen medical hazards and to lessen the burden of medical costs from their shoulders. 5 people said that they consider Medical Insurance as a tax saving tool only. They take it as an investment on which they can enjoy tax benefit or tax deduction.
- 38 respondents who pay Health Insurance premium every year they responded to this question and it was found around 40% consider it to be beneficial for both social security and as a tax saving tool. Only 13% people consider it to be a tax saving tool and 47% consider it to be a social security scheme.

Spending Pattern of Health Insurance Policy

- The sample contains 50 respondents (47 have taxable income and 3 have nontaxable income) who are invested in medical insurance. Out of 47 respondents, 36 respondents are paying the policy premium by their own and the rest 11 respondents are under the corporate policy and hence they need not to pay any premium by their own earned money. Out of the 3 respondents, 2 respondents are paying the policy premium by their own and the rest 1 respondent is under the corporate policy and hence they need not to pay any premium by their own earned money.
- Only 5 percent respondents have sum assured more than 5 lakhs, while 10 percent respondents have sum assured less than one lakh.
- Out of 36 respondents, 21 respondents (58%) pay premium less than Rs.10000, 7 respondents (20%) pay premium within Rs. 10001-15000, 5 respondents (14%) pay premium within Rs. 15001-20000, 3 respondents (8%) pay premium within Rs. 20001-25000. On the contrary, the 2 respondents who pay no tax, one pays premium less than Rs.10000 and the other respondent (50%) pays premium within Rs. 10001-15000.
- Here the difference in approach while investment among the gender is clearly observed. Around 72.7% male are covering their spouse but no one in female are doing the same. The reason in most of the cases is that wives health has already been covered by their husband mainly due to the reason that their husbands are in higher tax slab.
- Respondent who are in the age bracket of 25-40years and 41-50years invest highly in health insurance. The reason being these people have high income and they want to take advantage of section 80D and young people are more aware and since premium gets too high for people age more than 50years they try to cover the health expenses from their own fund.

Factors affecting the Consumers Buying Behavior of Health Insurance Policy

Nine variables have been identified, which can possibly have an impact in the buying behavior of consumers with respect to health insurance policy. At first, the reliability test has been conducted and it has been found that if one variable is deleted the value of Cronbach's Alpha value is increased from 0.532 to 0.673. Thus, the study deleted the variable (i.e., doctor rejects patients covered by health insurance).

The factor analysis has been used here to identify the factors affecting the consumers to choose a health insurance policy. The value of KMO is 0.632 and the chi-square value of the Bartlett's test of sphericity is 72.69 which is significant at 5 percent level of significance. This infers a strong association among the variable and hence factor analysis is justified.

Four factors have been identified having Eigen value more than one (Table 1) which can explain approximately 72% of the variability.

Thus the study identified four factors get four factors which can be named as follows (Table 2)

- Factor 1: Service Effect
- Factor 2: Agent Force
- Factor 3: Scheme pattern
- Factor 4: Insured Preference

Table 1: Total Variance

Component	Initial Eigen values			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.945	24.317	24.317	1.945	24.317	24.317	1.640	20.500	20.500
2	1.418	17.723	42.040	1.418	17.723	42.040	1.442	18.027	38.527
3	1.212	15.151	57.192	1.212	15.151	57.192	1.319	16.492	55.019
4	1.122	14.021	71.213	1.122	14.021	71.213	1.295	16.193	71.213
5	0.952	11.899	83.112	--	--	--	--	--	--
6	0.623	7.786	90.898	--	--	--	--	--	--
7	0.516	6.444	97.342	--	--	--	--	--	--
8	0.213	2.658	100.000	--	--	--	--	--	--
Extraction Method: Principal Component Analysis									

Table 2: Rotated Component Matrix

	Component			
	1	2	3	4
Smooth Transformation with Age	0.016	-0.019	0.939	-0.041
Prefer Govt Schemes Over Pvt.	0.326	0.282	0.268	0.427
Agent Satisfaction	-0.081	0.893	0.015	0.057
Plan Selection by Agent	0.272	0.708	-0.081	-0.112
Satisfied with the Increase in Premi with Age	-0.150	-0.224	0.444	0.620
Simple Claim Procedure	0.023	-0.004	-0.215	0.788
Service of Hospital Having Hip	0.852	0.068	0.206	-0.191
Settlement as Per Prescribed Time	0.839	0.089	-0.271	0.231
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.				

Association between Factors

The study further runs the correlation test to identify the relationship among the factors.

Table 3: Service Effect on Insured Preference

Correlation	Service Effect
Insured Preference	0.056*
*significant at 5 percent level	

There is a positive relation between the service effect and insured preference but it's not a very strong one.

Table 4: Service Effect on Scheme Pattern

Correlation	Service Effect
Scheme Pattern	0.248*
*significant at 5 percent level	

There is a positive relation between the service effect and scheme pattern.

Table 5: Agent Force on Scheme Pattern

Correlation	Agent Force
Scheme Pattern	0.044*
*significant at 5 percent level	

There is a positive correlation between Agent Force on Scheme Pattern, infers if agent provide a good service the customer can get a good scheme selected with the help of the agent.

Conclusion

This paper seeks to explore primarily the factors affecting the buying behavior of the customers with respect to health insurance policy in Kolkata. In addition the study also examines the spending pattern and awareness level of health insurance policy to the tax payers and non-tax payers.

The spending pattern of taxable people, only 55% people consider health insurance as an option in spite of the advantage and deduction under section 80(D) of the Income Tax Act, 1961. Thus many consider life insurance as a tax saving tool but health insurance is more towards social security. Irrespective of income people neglect health insurance investment irrespective of income level (i.e. 55% for taxable and 20% for non-taxable) like to spend certain amount for health insurance. The awareness level of the people of Kolkata is high since 92% respondent said they know the importance of health insurance and only 8% respondent said they didn't have any idea about it. Despite the high awareness level only 50% respondent are covered and 38% pay premium to cover their spouse, family and parents. They also take the tax advantage u/s 80(D) of the Income Tax Act, 1961. Health insurance not only provides tax benefit but also considered as a social security tool. But the people considered it as a social security tool as compare to tax saving instrument.

Thus the results of the study find enormous scope to improve the level of awareness amongst the buyer and to motivate them towards purchase of health insurance not only as a tool for social security but also to an instrument of tax savings. The following recommendation may be useful for the marketers to design the health policy.

- More awareness campaign in rural as well as in the urban area has to be conducted by the Government in association with the Insurance Companies.
- The problem of lower income group has to be understood and appropriate measures are to be taken to address their problem. For this further study regarding the nature of the problem is required.
- The higher income group is getting more tax benefit on the premium that they pay. For example, for Rs. 10,000 premium, the effective cost to them after tax benefit @ 30% is Rs.7, 000. Whereas for low income group who pay the same premium, the effective cost for them will be eitherRs. 9,000 or Rs. 8,000 as per their respective tax slabs.
- Thusthe government may think of restructuring the 80(D) of Income Tax, 1961 so that the low income group gets the maximum benefit without hampering the government revenue.
- It's not possible for the government alone to provide the social security. Thus it may be recommended that the private insurance player must join hand in hand with the government to provide the low income group people the social security and design a policy similar to Pradhan Mantri Suraksha Bima Yogana, which will only be available to the low income group people.

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ORAL PRESENTATION-3

Consumer Attitudes on E-Wallet Services: An Empirical Study Based on India

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Abstract: E-wallet is a young concept in India. However, it has become popular in a very short span of time. Digital wallets or e-wallets bypass the time and place barrier by allowing the customer to perform real time transaction any time and from anywhere. The purpose of the study here, is to identify the underlying key dimensions of service quality in the context of e-wallet services in India and to find out effects of the Indian e-wallet users' characteristics on his/her frequency of use of e-wallet services. An exploratory study using Purposive sampling survey was carried out for the purpose. Principal Component Analysis conducted on 248 responses revealed four factors that explained 64% of the variation in perceived service quality dimensions. The factors were found to be uni-dimensional, valid and reliable. Chi-Square analysis revealed that customer demographics play a significant role in frequency of use of digital wallets for payment. The contribution of the study is that it develops an additional insight to the theoretical foundation of e-service quality in the Indian context. The research will help Digital Wallet companies to have a comprehensive, holistic and clearer understanding of factors that influence the satisfaction level of Indian consumers.

Keywords: E-Wallet, Service Quality, India

Introduction

Smartphones have gradually become an integral part of our daily life. They have bypassed the use as mere communication devices but are now used for socialization, entertainment, education, search of information and even payment. The advent of mobile banking, contactless mobile payments and peer-to-peer mobile payments has transformed the way people manage and make transactions. Mobile wallet is just the digital counterpart to a physical wallet. However, the primary difference between an account with the e-wallet company and a bank account is that the e-wallet company does not charge money for making transactions and saves the customer from the burden of providing card details and pin number for every transaction. The e-wallet market has recently grown considerably owing to the demonetization move by the Indian government. The vision to reach the remotest and underdeveloped regions of the country through mobile and wireless technologies has transformed the prospects of e-wallet ecosystem. In India, awareness is increasing gradually about the economic benefits that mobile payments provide to the society as it has significant lower costs than cash-based services and existing card payments (Mallat, Rossi, & Tuunainen 2004). Therefore, increasing awareness about usage of mobile payment services carries utmost importance for both Governments and marketers. However, since most of the companies offering e-wallet services are new players in the country, they are yet to attain scale or profitability. The primary reason behind this is due to the fact that they are still experimenting with various business models and their focus is solely on increasing the customer base. Hence, there is a need for better understanding of the factors influencing service quality perceptions of digital wallets in India.

Measurement of electronic service quality is an emerging area of research that holds critical importance for businesses wanting to improve their customer base in the electronic marketplace. Zeithaml was supposed to be the first one who came up with the definition of e-service quality. Over the years, many scales have been developed by researchers wanting to measure service quality for different online services. The most notable ones include- ESERVQUAL by Zeithaml et al. (2001); SITEQUAL by Yoo & Donthu (2001); WebQual by Loiacono et al. (2002) and eTailQ by Wolfinbarger & Gilly (2003). In 2005 Parasuraman, Zeithaml & Malhotra conducted a study to explore the measures of e-service quality based on earlier researches on traditional service quality and different scales relating to e-service quality and developed an E-S-QUAL Scale with 4 dimensions relating to : efficiency, fulfilment, system availability, and privacy and the E-RecS-QUAL Scale with 3 dimensions relating to responsiveness, compensation, and contact. The scale demonstrated good validity and reliability in their research. However, it has to be taken into account that SERVQUAL requires context-specific adaptations before it can be effectively employed (Parasuraman et al. 1991). For example, the issue of transactions security is very important for the banking sector, but is not so for education sector. Santouridis (2012) applied the E-S-QUAL Scale for measuring the e-commerce service quality in Greece. The research confirmed the four factor result in E-S-QUAL Scale with efficiency being ranked to have the highest contribution on overall satisfaction, perceived value and loyalty. The scale was also found to be highly reliable and Multiple Regression Analysis revealed that apart from efficiency, privacy and fulfilment also had significant positive effects on overall satisfaction. Rathore in her 2016 article on adoption of Digital wallet by Indian Consumers tried to find out the extent to which consumers are accepting digital wallet as a mode of payment as well as the level of satisfaction with this mode of payment. The major findings of the research include three factors that play an important role in adoption of digital wallet – the first being user convenience in buying products online, the second factor being brand loyalty and the third relates to usefulness of digital wallet. It was observed that users of digital wallet were satisfied with the services provided to them. However, concerns over security and safety of the funds as well as dependency on internet connection to make payment remains one of the major reasons for less adoption of digital wallet.

The research questions include:

RQ1: What are the key dimensions of online service quality in case of e-wallet services?
RQ2: How do the effects of the Indian e-wallet users' characteristics influence his/her frequency of use of e-wallet services?

Research Model

E-SERVQUAL, which was developed by Parasuraman et al. (2005) forms the basis of the present study, since it provides a more comprehensive approach and supports the measurement of both pre- and post-e-service quality aspects. (Santouridis 2012) The E-SERVQUAL Scale can be classified into two scales; E-S-QUAL or core scale, and E-RecS-QUAL or recovery scale. The four dimensions of E-S-QUAL used were efficiency, fulfillment, system availability and privacy with 16 items. For E-RecS-QUAL, three dimensions used were responsiveness, compensation and contact with 9 items. Based on the review of several other literatures pertaining to e-service Quality, one new dimension- perception of security risk was added.

Methodology

Research Design

The research follows an Exploratory Research approach since the subject is relatively new in India. To analyze the propositions, an empirical Survey of adopters of digital wallet services was conducted.

Research Instrument

A structured questionnaire primarily based on E-SERVQUAL proposed by Parasuraman et al. (2005) has been adapted for the study. Items selected for the constructs were primarily adapted from previous studies to ensure content validity. Modifications were made to the scale to fit the purpose of the study. All the questionnaire items were measured using a five-point Likert scale which ranged from (1) strongly disagree to (5) strongly agree.

Mode of Data Collection

The questionnaire was administered by personal and telephonic interview and in some cases questions were mailed to respondents. A purposive sampling method was used to consciously select customers who meet the criteria of having used e-wallet services in the last three months. The respondents were selected from educational institutions, shops, offices and households.

Universe and Sample Size

Most of the sample respondents belong to Kolkata and some are from Mumbai and Bangalore. As per Basu et al. (2013), the urban population residing in the metro cities of India show uniformity in their attitudes and temperaments, hence the choice of 3 cities can be taken as an appropriate representation of Indian urban population. In total 300 questionnaires were distributed, of which 248 valid questionnaires could be retained for analysis purpose.

Research Techniques Used

To find out answers to the research questions, data were analyzed using the following techniques:- Principal Component Analysis, Chi-Square tests, Cluster Analysis, MANOVA and Discriminant Analysis. SPSS v.22 and AMOS v.23 software were used for analysis purpose.

Methodology

Table 1: Demographic Profile of the Respondents

Characteristics		No. of Respondents	% of Respondents
Gender	Male	132	53.2
	Female	116	46.8
Age (In Years)	<25	23	9.3
	26-40	184	74.2
	40-55	29	11.7
	>55	12	4.8
Education	High School Or Less	20	8.1
	College	19	7.7
	Graduate	105	42.3
	Post-Graduate	103	41.5
Income Range/Month (In Rs.)	<25000	26	10.5
	25000-50000	53	21.4
	50000-75000	54	21.8
	>75000	115	46.4
Duration Of Usage	<3 Months	36	14.5
	3-6 Months	38	15.3
	6-12 Months	42	16.9
	>12 Months	132	53.2
Frequency Of Usage	Light Users (<3 Times/Month)	60	24.2
	Medium Users(3-8 Times/Month)	88	35.5
	Heavy Users (>8times/Month)	100	40.3

The dimensionality of the scale was initially assessed through principal components analysis (Hair et al. 2010). The criterion followed for the extraction of the factors was to have an Eigen value higher than 1. The items having factor loadings less than 0.5 were eliminated (Hair et al. 2010). Finally, four factors, all having Eigen values of unity and above were extracted. The individual dimensions of the proposed instrument explained total variance exceeding 64 per cent, suggesting the appropriateness of the process. Based on shared meaning on the items of each factor they were named as- Efficiency-Privacy, Fulfilment, System Availability and Contact. The factors were checked for reliability. The Cronbach's alpha values from the SPSS output for each component are greater than 0.7, except for the Contact dimension which is 0.691, very close to 0.7. A composite table with reliability of factors and their loadings from rotated component matrix are presented in Table 2 for better clarity of the findings from Principal Component Analysis and Reliability tests.

Table 2: Composite Table Depicting Reliability of Factors and Factor Loadings

Reliability of Factors	Construct items	Factor Loadings			
		1	2	3	4
Efficiency - Privacy α=.893	DW is accepted by various merchants.	0.764	--	--	--
	DW makes shopping easier.	0.778	--	--	--
	Takes steps to ensure that the info-in-transit is not deleted	0.616	--	--	--
	It protects info about my Web Payment behaviour	0.520	--	--	--
	It doesn't share info with other sites	0.636	--	--	--
	It protects info about my bank a/c and card details.	0.660	--	--	--
	All communications are restricted to the site & me.	0.568	--	--	--
Fulfilment α = .871	DW is always available for business	--	0.621	--	--
	DW launches & runs right away	--	0.542	--	--
	It sends & receives money real time	--	0.760	--	--
	It completes payment transactions instantly	--	0.788	--	--
	DW will not deny having participated in a transaction after processing it.		0.637	--	--
	Provides me with some evidence	--	0.543	--	--
Systems Availability α = .827	DW enables me to complete transaction quickly	--	--	0.631	--
	Info at the site is well organized	--	--	0.872	--
	DW is simple to use	--	--	0.691	--
	DW does not crash	--	--	0.648	--
Contact α =.691	Provides me with a tel ph/email to reach the company in case of problem	--	--	--	0.650
	Has customer reps available online	--	--	--	0.793
	Offers the ability to speak to a live person in case of any problem	--	--	--	0.739
Source: Researchers' Analysis					

We continue to our second research objective which relates to identifying the effects of the Indian e-wallet users' characteristics on his/her frequency of use of e-wallet services. For that, relevant Cross-tabulations using Chi-Square tests were conducted. A composite table depicting the implications of Demographic variables on frequency of use are presented in Table 3 which is being followed by the explanations from Chi-Square analysis.

Table 3: Composite Table Depicting the Relationship of the Demographic Variables with Frequency of Use of E-Wallets

Customer Demographics		Usage (%)			D.f.	CHI-SQ Value	**sig**
		Light	Medium	Heavy			
Gender	Male	33.3	4.5	62.1	2	119.127	0.000*
	Female	13.8	70.7	15.5			
Age	< 25	69.6	8.7	21.7	6	52.260	0.000*
	26-40	18.5	35.3	46.2			
	41-55	6.9	58.6	34.5			
	> 55	66.7	33.3				
Edu Level	High School Or Less	85	-	15	8	79.798	0.000*
	Some College	52.6	47.4	-			
	Graduate	19	29.5	51.4			
	Post-Graduate	12.6	46.6	40.8			
Household Income Range/ Month	< 25K	80.8	7.7	11.5	6	57.055	0.000*
	25-50K	26.4	43.4	30.2			
	50-75K	13	35.2	51.9			
	> 75K	15.7	38.3	46.1			
Duration Of Dw Usage	< 3 Months	58.3	41.7	-	6	78.522	0.000*
	3-6 Months	42.1	47.4	10.5			
	6-12 Months	31	33.3	35.7			
	> 12 Months	7.6	31.1	61.4			
Source: Researchers' Analysis							

Results from Table 3 indicate that demographic variables significantly influence the frequency of e-wallet usage. Males were found to be heavy users while females were found to be mostly medium users. The reason may be that males are more tech-savvy compared to the females in India. In a study by Times of India, it was found that males shop more online compared to females. Again, people belonging to the age group of less than 25 were found to be light users. This can also be attributed to the reason that people in this age group are mostly students or have just joined the workforce. They do not have too much money on hand. Again people aged 55 and above were found to be light users. This is due to the fact, that the older people get, they are less tech savvy compared to the younger generation. People with education level high school or less are light users. One of the reasons is that most of the sample respondents in this study with education level high school or less were students with little disposable money. However, some shop owners and small time businessmen were also part of the sample with education level high school or less. Their light usage can be attributed to being less tech-savvy compared to their more educated counterparts. Light Income group people were found to be light users as expected since they have less disposable monthly income. It was also observed that people using e-wallets for more time were found to be heavy users. This can be attributed to the fact that as people gain more familiarity with the uses of new technology services, they become more efficient in using it as per the occasion demands.

Conclusion

There is a dearth of research in measurement of e-service quality particularly in the Indian context. The contribution of the study is that it develops an additional insight to the theoretical foundation of e-service quality in the Indian context. The findings have important implications that ensure that quality services provided by e-wallet service vendors are important to retain customers. The research will help Digital Wallet companies to have a comprehensive, holistic and clearer understanding of factors that influence the satisfaction level of Indian consumers.

Limitations

This study involves a number of limitations that need to be acknowledged. First, the primary limitation of the research relates to the small sample size, as generalizations are difficult to make with small sample sizes. Second, the 20 E-Service Quality items were selected through review of literature. Results may differ if different items were selected or different scales are used. Third, data collected for the study focused on one particular type of service domain, e-wallet service quality. Therefore, results cannot be generalized for other service contexts (such as online travel portals or online auction sites).

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ORAL PRESENTATION-4

A Study on Tea Drinking Habit of College Students in Kolkata

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Abstract: Tea isn't just a drink in India but it is an essential beverage in everyday life. Tea drinking has evolved in different ways over the years in India and differs from region to region. The primary objective of the research is to understand the perception of the college students of Kolkata towards drinking tea. The secondary objective is to understand the factors affecting the consumption of tea and the frequency and satisfaction level of consumers towards drinking tea. The study is descriptive in nature and cross sectional research design was applied and primary data was collected by administering a structured questionnaire. The secondary data was collected through Internet. A sample size of 100 college students was taken for the study from Kolkata. It has been found from the study that majority of people consume tea daily by both females and males in the similar ratio. Mostly Tata tea is preferred followed by Brooke Bond. Mostly respondents obtain tea from local departmental which is mainly branded tea. Since price is not an important consideration the main focus should be on the quality of the product. Respondent's mainly state refreshment as the reason behind consumption and maximum respondents are satisfied with the brand of tea consumed. Customers are not much moved by promotions but in order to attract the consumer's useful gift articles, free samples could be used in the product.

Keywords: College Students, Perception, Taste and Preference, Tea Drinking, Kolkata

Introduction

India vies with China for the title of world's largest producer of tea. There are innumerable tea estates employing millions of tea workers across the geographically and ethnically diverse subcontinent of India. Tea is so engrained in the fabric of India's culture that majority of the tea it produces is consumed by its own people.

India's terrain defines its tea-growing regions by the subcontinent's significant differences in climate and geography. The three main Indian tea regions are Assam, Darjeeling, and Nilgiri.
The tea grown and produced in India varies as significantly as its population and its geography. Each tea-producing region of India provides a different yet perfect climate for tea growing, leaving us so many ways to explore the subcontinent through its culture of tea.
Tea drinking has evolved in different ways over the years in India and differs from region to region.

Tea Industry in India

Tea isn't simply tea in India but it is like a staple beverage here and a day without it is impossible and incomplete. Indians prefer their steaming cup of tea because for them it acts as an energy booster and is simply indispensable. This popular beverage has a lot of health benefits too as its antioxidants help to eliminate toxins and free radicals from the blood.

Major Players of Tea

The tea industry handsomely contributes to the Gross National Product. India can currently be regarded as one of the global leaders when it comes to production, export and consumption of tea.

- Tata Tea
- Brooke Bond Taaza
- Lipton Green Tea

A study conducted by Yang and Landau (2000) on "Effects of Tea Consumption on Nutrition and Health" show beneficial health effects of tea in animal experiments and some human studies. The two most extensively investigated diseases are cancer and heart disease.

A study conducted by Canbrera (2005) on "Beneficial Effects of Green Tea" shows tea is the most consumed drink in the world after water. Green tea is a 'non-fermented' tea, and contains more catechins, than black tea or oolong tea. Recent human studies suggest that green tea may contribute to a reduction in the risk of cardiovascular disease and some forms of cancer, as well as to the promotion of oral health and other physiological functions such as anti-hypertensive effect, body weight control, antibacterial and antivirasic activity, solar ultraviolet protection, bone mineral density increase, anti-fibrotic properties, and neuro-protective power. Increasing interest in its health benefits has led to the inclusion of green tea in the group of beverages with functional properties.

A study conducted by Singh (2012) on "Consumers buying behaviour towards branded tea's" examines the consumers buying behaviour towards Branded Tea's. The study reveals that Tea is by far the most popular beverage in India. The study linkages between branded and local tea. The findings of the study documented that at all India level, tea penetration averages 77.2%. The results indicate that price, gifts, schemes, brand, quality standard, packaging, consumption times, attractive facilities, awareness of the consumers are important factors which affect the consumers buying behaviour toward branded Tea's. In addition to this a number of challenges which are faced by the consumers are identified and discussed in this research paper.

It has been found from the study that majority of people consuming the tea 3-4 times in a day. Dark tea is also preferred by large number of respondents. More than half of the respondents are unaware of the ingredients of the tea. Majority of the samples did not check whether it is of quality standard or not. Mostly respondents obtain information through friend and advertising. Large numbers of the respondents purchase loose tea. The study reveals that mostly respondents prefer Tata tea than others. Half of the respondents do not have any knowledge about their tea brand manufacturer. 46% of the people use 250 gms packing of tea. A large percentage of the people purchase only branded tea and maximum people give first preferences to brand name in purchase of tea.

A Study conducted by Nelson &Poulter (2004) on "Impact of tea drinking on iron status in the UK: a review" finds out that there is no need to advise any restriction on tea drinking in healthy people with no risk of iron deficiency. In groups at risk of iron deficiency the advice should be to drink tea between meals and to wait at least 1 hour after eating before drinking tea.

Objectives of the Study

A research objective is a clear, concise, declarative statement, which provides direction to investigate the variables. Generally research objective focuses on the ways to measure the variables such as to identify or describe them.

- Primary Objective
  To identify the preference for tea by college students of Kolkata
- Secondary Objective
  a) To find out the frequency of tea consumption among college students of Kolkata.
  b) To find out the characteristics and forms of tea most preferred by the college students in Kolkata.
  c) To find out the factors affecting their purchase decision for a particular brand of tea.

d) To find out the overall satisfaction level of the respondents with respect to the brand of tea they consume.

Research Methodology

Research is an art of scientific investigation which includes collection, analysis and interpretation of data. It is a process of systematic study. Research has to proceed systematically in the already planned direction with the help of a number of steps in a sequence.

To make the research systemized, the researcher has to adopt certain methods. The method adopted by the researcher for completing the project is called Research Methodology.

It is a blue print that is followed in completing a study.

Research Design

- The type of research adopted in the present study is the descriptive research.
- A quantitative research approach has been adopted for this study.
- A single cross sectional research design has been followed where a single set of respondents have been chosen from the target audience (college students of Kolkata) and information has been collected from their responses only.

Sampling Type

A convenience sampling technique was adopted to draw a representative sample from among the various college students of Kolkata, West Bengal. It is a non-probabilistic type of sampling.

Sample Size

The sample size that is taken here for the study is 100.The respondents consist of college students, who are at present studying in one of the many colleges in the Kolkata region.

Demographic Profile of Sample

- The respondents consists of college students, who were mainly urban youth who hail from different parts of Kolkata.
- They belong to the age group of 18-22 years of age.
- Respondents include both male and female gender.

Research Instrument

Quantitative data collection was achieved by self-administration of the questionnaire. The questionnaire was distributed through Google forms. Data analysis has been mainly done using Microsoft Excel. The tools used are:

- Bar Graphs
- Pie Charts
- Measures of Central Tendency

Secondary Research

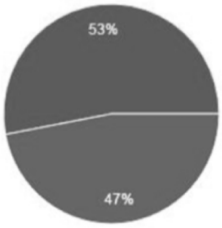
Literature Review from various articles, websites and journals that are available online. Reference to different books and online websites has taken place.

Primary Research

A descriptive research done through convenience sampling using a Consumer Questionnaire (circulated through Google Forms).

Results & Discussions

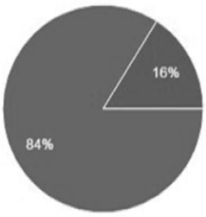
The Survey carried out reveals that 47% of the respondents are males and 53% of the respondents are female (Figure 1). Hence, it is a fairly well distributed survey sample. The questionnaire administered to the college students which included both female and male genders in fairly equal ratio.



Female
Male

Figure 1: Demographics with Respect to Gender of the Respondents of Kolkata

The survey tells us that majority of the respondents drink tea i.e. 84% of do drink tea while 16% of them do not drink tea (Figure 2). The survey tells us that tea is well in demand and this industry has a wide scope in the market further.



Percentage of people who drimk tea
Percentage of people who do not drink tea

Figure2: Respondents Who Prefer to Drink Tea

The survey shows that 35% of the respondents drink tea daily while 24% drink tea 2-3 times a week. There are a total of 21 respondents out of 100 who prefer drinking tea twice a day. 14% of the total respondents prefer drinking tea 2-3 times a month and the remaining rarely drink tea, once in 2-3 months. This question aims to find out the frequency of tea consumption by college students in Kolkata. The regularity of their tea drinking habit will help to find out their reasons for their preference of tea and their buying decision behavior.

Figure 3: Frequency of Tea Consumption by College Students in Kolkata

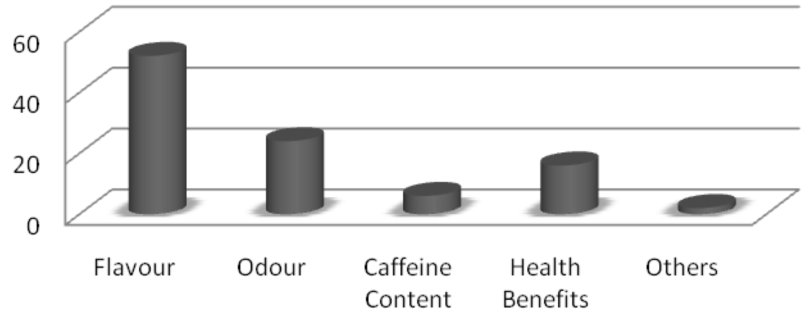


Figure 4: Characteristics that Helps Customer Take Buying Decision

More than half of the respondents prefer tea due to flavor of tea while 16% of them prefer it due to its odour. 16% prefer tea for health benefits. Therefore tea marketers can introduce new variety of flavors and increase market share as compared to other beverages.

Table 1: Characteristics that Helps Customer Take Buying Decision

Flavour	52
Odour	24
Caffeine Content	6
Health Benefits	16
Others	2

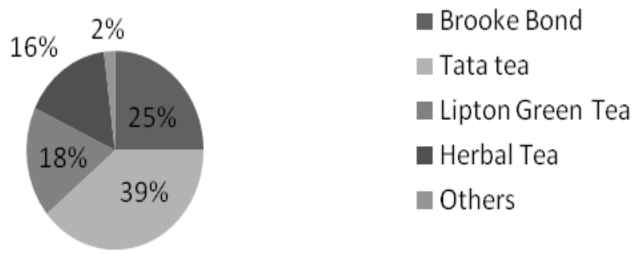


Figure 5: Brand Preference of Tea by College Students

The survey answers the question as to which brand of tea is most preferred by the respondents and Tata Tea has been chosen by 39% of the respondents as the brand consumed followed by Brooke Bond with 25%. The respondents also prefer drinking Lipton green tea and herbal tea

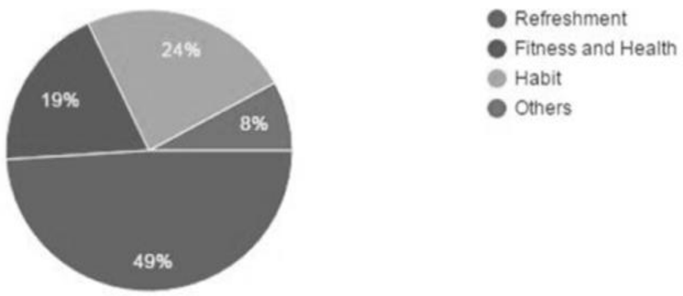


Figure 6: Purpose of Tea Consumption

Here 49% of the respondents have stated refreshments as their reason for consumption of tea while 24% and 19% have stated habit and fitness as their reason respectively while 8% of the people have other reasons for tea consumption. Finding out the purpose behind the reason for tea consumption can be very helpful for the marketers to introduce a strategy specifically for their chosen target market and establish their brands in the mind and hearts of the consumers.

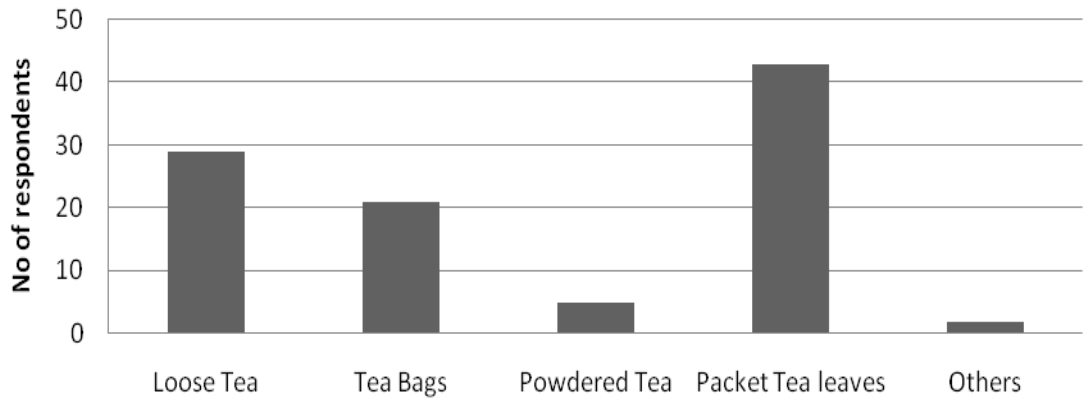


Figure 7: Most Preferred Form of Tea by Respondents

Table 2: Preference for the Different Types of Tea

Loose Tea	29
Tea Bags	21
Powdered Tea	5
Packet Tea leaves	43
Others	2

The survey shows that 43% of the respondents prefer packet tea leaves while 29% prefer loose tea. 21% of the respondents prefer tea bags. So there is a wide scope to attract customers by mentioning details and benefits of the product on the packet of the product. Also the shopkeepers can be asked to market loose tea to increase market size. So the company can attract more customers by introducing new flavours in a particular brand.

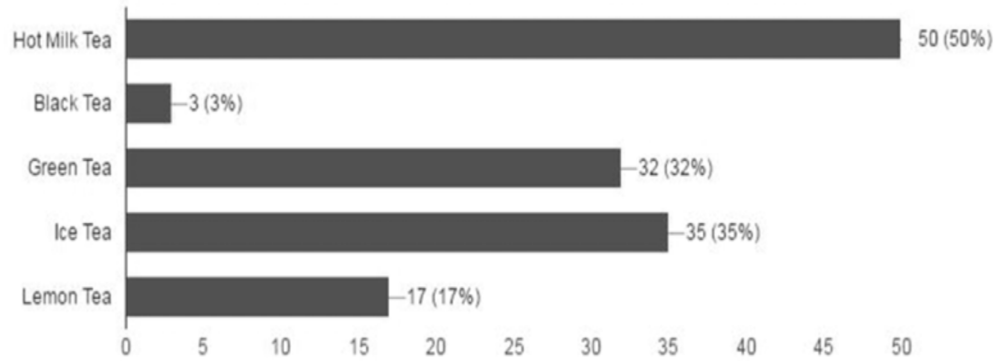


Figure 8: Preference for the Different Types of Tea

The survey tells us that hot milk tea is preferred by 50% of the respondents, black tea by 3%, green tea by 32%, ice tea by 35% and lemon tea by 17% of the respondents. So special flavours can be innovated for hot milk tea, green tea and ice tea to increase sales.

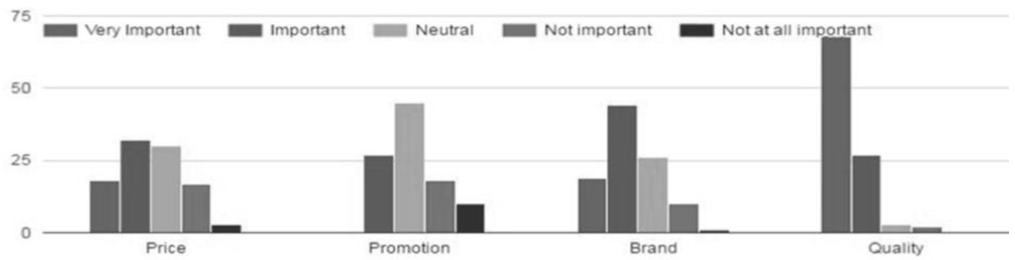


Figure 9: Different Factors Affecting the Purchase Decision of Tea by College Students in Kolkata

Quality of tea is considered to be most important factor affecting purchase of Tea. Brand of tea is considered to be an important factor affecting purchase of Tea. Respondents are neutral towards promotion of a brand of tea. Price is considered as important for few respondents while few are neutral towards it

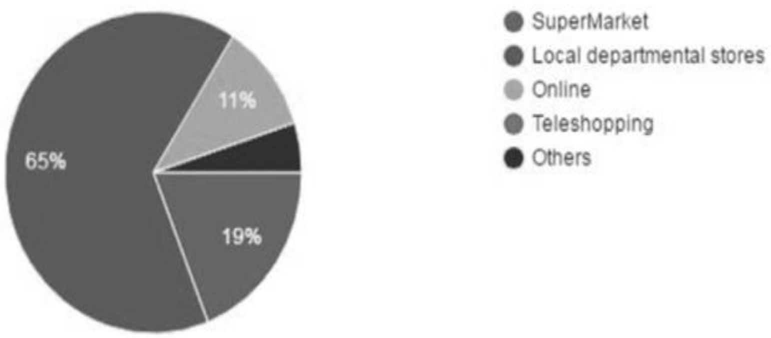


Figure 10: Most Commonly Preferred Places for Purchase of Tea

Majority of the respondents (65%) buy tea from local departmental stores, 19% from supermarket and very few prefer to purchase tea from online stores. So tea industry must really make strategies to advertise its product at departmental stores to tap the untapped market.

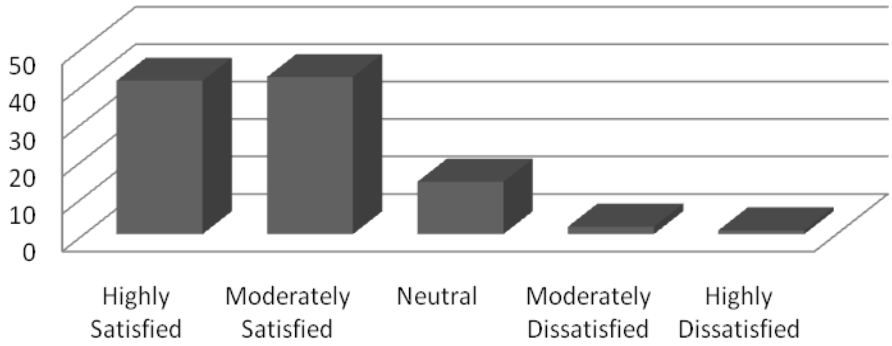


Figure 11: Overall Satisfaction Level of Respondents on a Likert Scale

Table 3: Overall Satisfaction Level of Respondents on a Likert Scale

Loose Tea	29
Highly Satisfied	41
Moderately Satisfied	42
Neutral	14
Moderately Dissatisfied	2

On a general scale of satisfaction 41% respondents are highly satisfied with the brand of tea they consume and 42% are moderately satisfied which shows that their demands are getting fulfilled and tea industry has done well in their field. Only a minimal number of consumers are dissatisfied with their tea preferences.

Conclusion

It has been found from the study that majority of people consume tea daily by both females and males in the similar ratio.

Milk tea and ice tea is preferred by large number of respondents. . The study reveals that mostly respondents prefer Tata tea than others followed by Brooke Bond. Mostly respondents obtain tea from local departmental stores which can be a good place to market products. A large percentage of the people purchase only branded tea and maximum people give first preferences to quality in purchase of tea.

The study reveals that the tea market is demand driven and various brands face cut throat competition. The pull of the consumer is so strong that the dealers are forced to keep the brand of consumer’s choice.

Most of the respondents prefer hot milk tea over other forms of tea. Hence in order to promote the consumption of other types of tea the companies should adopt better marketing strategies.
Since majority of respondents prefer to buy local tea the companies should offer discounts and offers in order to promote their product.

Since price is not an important consideration the main focus should be on the quality of the product.

Respondents mainly state refreshment as the reason behind consumption which gives marketers the idea that new ideas can be generated regarding products. In order to capture a large share in the market the brand of tea could be manufactured with more taste and good colour.

Maximum respondents are satisfied with the brand of tea consumed. When asked for the consumer promotion, customers are not much moved by promotions but in order to attract the consumer’s useful gift articles, free samples could be used in the product.

Company should see the strategy followed by the competitors so that they adopt according to them and manufacturer must pay attention to the quality; since customers have a wide range of brands to select from otherwise the business would be ruined if quality is not maintained.

Limitations of the Study

- The major limitation of the study is that the total population of college students in Kolkata is too large, whereas the sample survey is limited to 100 individual only.
- The study is restricted to Kolkata region.
- The research is restricted to a few brands of tea only.
- The sampling is done based on convenience sampling; and hence has disadvantages of the same.

Scope for Future Research

- Future research could be conducted using a larger sample to include a greater sample size.
- Moreover, my research was restricted to tea drinking habit where as other beverages can also be included on which research can be done.
- A further research could be done taking into account more brands of tea and their varied types of products that are offered.
- More time given to the study will yield better results.
- The study can be done in a broader prospect.

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ORAL PRESENTATION-5

Green Consumerism: Analyzing Consumer Attitude towards the Green Marketing Efforts and its Impact on Purchase Intention

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Abstract: Environmental concerns have captured attention of the global communities for almost five decades now. Number of environmental issues in the 1980s-90s has placed environmentalism in the limelight. Efforts made by the environment activists have created consciousness about preserving nature and the environment amongst the mass. Effective use of natural resources and preservation of the environment has led way to a concept called green consumerism. Industry also looks for environment friendly propositions to offer and to go for sustainable marketing. Industries have started working on the various business operations like green-manufacturing or designing green products, processes, green-advertising and promotion, green-pricing, green-logistics and green-marketing etc. keeping eco-friendliness approach in mind. The paper investigates the level of green consumerism in the society with an objective to understand the impact of the green marketing efforts on the consumer attitude and their purchase intention for the environment friendly products. The findings of the paper reveal that Income and Education influence the consumer's purchase intention. There is not a significant relationship between green marketing efforts and consumer's purchase intention. The study will clarify the consumer's attitude and purchase intention towards green marketing efforts as well as corporate to follow appropriate green marketing strategy.

Keywords: Consumer Attitude Green Consumerism, Green Marketing, Sustainable Marketing.

Introduction

The population world over has risen to an era of consciousness where the bar has come to a level of making the world a better place to be in terms of environment and consumption. Value altogether has taken a different meaning where it not only looks at value for self but also looks at value for the society one lives in. Green Consumerism is a concept which entails minimum damage to the environment through use and consumption of eco-friendly products and recycling whenever and wherever possible. Green consumerism aims to align the purchase and consumption behavior of the consumer towards products that are relatively healthy for the environment. The consumption of such products will only lead to a sustainable environment. Green consumerism a move towards sustainable development is a contemporary subject which needs a wider understanding and acceptability by the masses. It addresses the need of exhibiting a change in attitude resulting in greener behavior towards purchase and consumption of goods with an elevated level of consciousness amongst masses on aligning their lifestyle for a healthy today and a healthier tomorrow. The choice between 'Green' and 'Non-Green' consumerism is therefore a matter that rests with the population and their level of concern for the environment which indirectly would decide the concern they will have for their own future. The onus of a better tomorrow does not lie on individuals alone but also lies on the companies that manufacture and market products. The companies too therefore need to play a role here in embracing the concept of green marketing and ensuring that the products they manufacture and sell are relatively greener and have a lesser negative impact on the environment. This collective effort would lead to a synergistic effect.

Green Marketing literature has been rich in terms of studies focusing on the research on environmental consumerism, factors affecting consumers' perception for green products, purchase behavior, green initiatives taken by corporate organizations, sustainability aspects and many other relevant areas of ecological marketing. There has been extensive development in the interest shown by marketing academicians as well as practitioners with a view to understand the impact of marketing on promoting and maintaining ecological awareness and consumption behavior. According to Doyle (1992); Peattie and Ratnayaka, (1992) green consumerism is responsible for influencing many organizations to turn green. Consumer awareness regarding environmental issues is very important to achieve sustainable development, since inclination towards green purchasing by consumers leads to sustainable consumption, which reduces the impact of society on the environment (Liu et al. 2012). Consumers are concerned about the promotion of eco-friendly products when they think that it is the preservation or cause deserving to curb the environmental deterioration (Ann et al. 2012).

There is also an argument that consumers, who are highly involved in the green marketing, are less affected by the advertising appeal which has not effect on their purchasing intention since they have been much more grabbed to the products. However, the green appeal is significantly persuasive on those who are less involved in the environment (Chitra 2007).The paper aims at understanding the level of awareness amongst the population towards green products, the impact of green marketing efforts on the consumer's attitude towards the brand, and to establish a relationship between green marketing efforts of companies and purchase intention of people. A survey was conducted on 200 people in North India and the data was drawn from different gymnasiums. People visiting Gymnasiums were chosen keeping in mind their level of health consciousness.

Thus, the questions that the researchers try to answer through this study are:
RQ1: Do green marketing initiatives impact the consumer attitude towards brand?
RQ2: Is there any relationship between the green marketing efforts and the consumer purchase intention for the green products?

Research Objectives:

1. To understand the consumer attitude and response pattern towards green initiatives/marketing efforts
2. To identify the relationship between green marketing efforts and the consumers' purchase intention for the green products.

The remainder of the paper is structured as follows. The next session provides a literature review on green marketing, green consumerism and their relationships with consumer behavior. Subsequently research hypothesis are presented based on the literature review. This is followed by a discussion of the research methodology and the findings from hypothesis testing. The last section provides the managerial implications of the study, limitations and the scope for future research.

Global climate change has put the world in an alarming situation. The awareness towards environmental protection and a growing concern towards environmental degradation have made 'Green Marketing' the most popular marketing term. This concept has changed consumer's inclination towards green products and services and has forced organizations to adopt green practices. According to the American Marketing Association, green marketing is the marketing of products and services that are presumed to be environmentally safe (Peattie 1999). According to (Polonsky 1994), "Green Marketing consists of all planned activities to generate and facilitate exchanges to satisfy human needs and desires with the least possible impact on environment. As per the study of Peattie (2001), the green marketing has evolved through three stages. First Stage was during the period of 1980s and second stage was during 1990s and the third stage began from 2000.

Green Marketing: Consumer Attitude–Behavior Link

Green is the most common buzzword these days (Aker 1991) Consumer's attitude is needed to be tested regarding environmental issues. Consumer Attitude towards the Environment Environmental attitude is identified as the judgment an individual has towards the protection and promotion of the environment. Coddington (1993) has been expressed the dual nature and attitude of male and female in liking and purchasing of green products. Environmental tags normally confuse a common person to differentiate from non-green products and their high prices.

For consumers who are more positive towards green marketing should be asked about their willingness to pay for them (McCloskey1990) and what is their consistency level (Ajzen, 1988) as well as the Packaging, Promotion, Distribution and Manufacturing related perception levels.

Consumers, who are aware of environmental issues, are called as Green Consumers (Soonthonsmai 2007). These green consumers are Green consumerism is framed by social, cultural and economic factors of society. It varies from country to country and culture to culture (Coddington 1993). According to the study of Ottman (1992), "Consumers accepted green products when their primary need for performance, quality, convenience and affordability were met, and when they understood how a green product could help to solve environmental problems". A study highlighted the gap of awareness about green marketing issues (Haws 2010) McCloskey (1990) expressed in their study that lifestyle, identity, ideology, choice, morale, ethics and responsibility towards quality of life, health affect the green consumerism. Green consumers are different from traditional consumers in terms of their attitude and behavior towards environmental products (Wong 1996).

The researchers extracted few of the attitudinal factors as well as behavioral factors related to their purchase intention for the green products and considered them in defining the scales to reveal from green consumerism perspective.

Methodology

The research methodology for the present study was based on descriptive research design. Stratified non-probability sampling method was used, which involves the sample being drawn from that part of the population that is close at hand. In this study, the target populations were men and women of 20 to 50 years old. The responses were collected from 224 respondents. The study was conducted considering only the green products in FMCG sector. A structured questionnaire has been developed based on the extensive review of literature. A pilot study was conducted for testing the questionnaire and further after certain amendments based on the feedback of the respondents the questionnaire was revised and finalized before collection of the data. The questionnaire was divided into two set of statements based on a 7 Point Likert Scale; one to measure the responses of the respondents on their attitude towards the green marketing efforts and another, their purchase intention for the green products towards such sustainable marketing efforts. These statements were developed after comprehensive literature review. The study has been conducted in India context.

Formulation of Hypothesis

Based on the review of the literature following hypotheses has been developed:
H1: Green marketing initiatives significantly impact the consumer attitude towards brand.
H2: There is a significant relationship between the green marketing efforts and the consumer purchase intention for the green products.
H3: Demographics influence the consumer's willingness to buy the green products.
H3a: There is a significant impact of Income on consumer's willingness to buy the green product.
H3b: There is a significant impact of Education on consumer's willingness to buy the green product.

Results & Discussions

Descriptive Statistics: The total of 224 respondents participated in the study in which 62% were female and 38% were male. Most of the respondents (48%) were belonging to the age group of below 21 years. There were 34% respondents who were belonging to the Income of less than Rs. 50000 and were having education of graduation only (Table 1).

Table 1: Demographic Findings of the Respondents

Demographics	Frequency	Demographics	Frequency
Age		**Education**	
< 21	107	Graduate	77
21-30	55	Post Graduate	76
31-50	37	Professional Degree	53
>50	25	Schooling	18
Total	224	Total	224
Monthly Income		**Occupation**	
< 50000	115	Business	64
50001-100000	47	Student	76
100001-150000	46	Professional Degree	68
>150001	16	Govt. Service	16
Total	224	Total	224

- Awareness about green products and marketing initiatives: Major respondents (90%) were aware about green initiatives and green products.
- Keeping environmental concerns in mind while buying a product: Only 35% told yes and rest of the 65% said no.
- The customer's attitudinal factors were asked through some statements on Likert's scale (From 1-7) where 1 stands for Strongly Disagree, 2 stands for Disagree, 3 stands for Sometimes Disagree, 4 stands for Undecided, 5 stands for Somewhat Agree, 6 stands for Agree and 7 represents Strongly Agree and the results were showing the average of 5.2 in all the statements related to consumer's attitude towards green marketing.
- The customers were asked to rate their purchase intention to buy the green products after seeing the Green Marketing Efforts (Advertisement, Packaging, Manufacturing/Distribution/Disposal) of these products from 1-7 Likert scale. The results were showing that the average of 3.4 in all the statements related to purchase intention of these green products

Testing of Hypothesis

H1: Green marketing initiatives have significant impact on the consumer attitude towards brand.
H0: Green marketing initiatives are not having any impact on consumer attitude towards brand.
H1: Green marketing initiatives are having any impact on consumer attitude towards brand.

Table 2a: Regression Analysis for Hypothesis 1

Coefficients[a]							
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
Constant	4.188	.596		7.024	.000	3.013	5.363
Packaging	.447	.044	.587	10.151	.000	.360	.534
Eco Mfg	-.135	.066	-.114	-2.040	.043	-.265	-.005
Promotion	-.089	.057	-.086	-1.549	.123	-.202	.024
Distribution	.079	.058	.079	1.365	.174	-.035	.193
a. Dependent Variable: Consideration							

Table 2b: ANOVA Analysis for Hypothesis 1

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	182.240	4	45.560	26.741	.000[a]
Residual	373.117	219	1.704		
Total	555.357	223	--		
a. Predictors: (Constant), Distribution, Promotion, EcoMfg, Packaging b. Dependent Variable: Consideration					

Green marketing mix attributes (Packaging, Promotion, Manufacturing and Distribution) were tested with the consideration to buy the green brand. Regression analysis was applied to the variables, we found that the significance value is less than 0.5, the null hypothesis is rejected and alternative hypothesis is accepted which shows Green Marketing initiatives are having an impact on consumer attitude towards brand. Separately if we will see, we will find that Packaging and Eco Manufacturing will be having significant impact and Promotion and Distribution will be having insignificant impact on green brand.

H2: There is a significant relationship between the green marketing efforts and the consumer purchase intention for the green products.
H0: Green marketing efforts and consumer purchase intention are not having positive relation.
H1: Green marketing efforts and consumer purchase intention are having positive relation.

Table 3: Correlation Analysis

Spearman's Rho		A	B	C	D	E	F	G
A	Correlation Coefficient	1.000	0.142*	0.099	-.310**	-.573**	0.534**	0.248**
	Sig. (2-tailed)	--	0.034	0.139	0.000	0.000	0.000	0.000
	N	224	224	224	224	224	224	224
B	Correlation Coefficient	0.142*	1.000	0.091	-0.135*	-0.342**	-0.045	-0.092
	Sig. (2-tailed)	.034	--	.176	.044	.000	.500	.170
	N	224	224	224	224	224	224	224
C	Correlation Coefficient	0.099	0.091	1.000	0.010	-0.128	-0.012	-0.106
	Sig. (2-tailed)	0.139	0.176	.	0.883	0.056	0.861	0.113
	N	224	224	224	224	224	224	224
D	Correlation Coefficient	-0.310**	-0.135*	0.010	1.000	0.499**	-0.059	-0.202**
	Sig. (2-tailed)	0.000	0.044	0.883	--	0.000	0.378	0.002
	N	224	224	224	224	224	224	224
E	Correlation Coefficient	-0.573**	-0.342**	-0.128	0.499**	1.000	-0.191**	-0.205**
	Sig. (2-tailed)	0.000	0.000	0.056	0.000	--	0.004	0.002
	N	224	224	224	224	224	224	224
F	Correlation Coefficient	0.534**	-0.045	-0.012	-0.059	-0.191**	1.000	0.289**
	Sig. (2-tailed)	0.000	0.500	0.861	0.378	0.004	--	0.000
	N	224	224	224	224	224	224	224
G	Correlation Coefficient	.248**	-.092	-.106	-.202**	-.205**	.289**	1.000
	Sig. (2-tailed)	.000	.170	.113	.002	.002	.000	.
	N	224	224	224	224	224	224	224
A: Packaging				E:Willingness				
B: Eco Mfg				F: Consideration				
C: Promotion				G: Likelihood				
D: Distribution								
* Correlation is significant at the 0.05 level (2-tailed). ** Correlation is significant at the 0.01 level (2-tailed)								

Green marketing efforts (Packaging, Promotion, manufacturing and distribution) were tested with the variables taken for purchase intention (willingness to buy, consideration and likelihood to buy these products) through correlation analysis and the results shown that there was less correlation or negative correlation between the attributes. Thus, H0 is accepted and it shows that green marketing efforts are not having positive relation with purchase intention.

H3a: Income will have a positive influence on willingness to buy green products.
H0: Customer's income will not have a positive influence on willingness to buy green products.
H1: Customer's income will have a positive influence on willingness to buy green products.

Table 4: Chi Square Analysis with Income Effect

Income * willingness Cross tabulation			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	106.485[a]	12	0.000
Likelihood Ratio	112.188	12	0.000
Linear-by-Linear Association	25.917	1	0.000
N of Valid Cases	224		
a. 7 cells (35.0%) have expected count less than 5. The minimum expected count is 1.07.			

Since the significance value is less than 0.5, the null hypothesis is rejected and alternative hypothesis is accepted which shows customer's income is an influencing factor of buying green products.

H3a: Education will have a positive influence on willingness to buy green products.
H0: Customer's education will not have a positive influence on willingness to buy green products.
H1: Customer's education will have a positive influence on willingness to buy green products.

Table 5: Chi Square Analysis with Education Effect

Education* willingness			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	53.492[a]	12	0.000
Likelihood Ratio	54.390	12	0.000
Linear-by-Linear Association	0.001	1	0.976
N of Valid Cases	224		
a. 5 cells (25.0%) have expected count less than 5. The minimum expected count is 1.21.			

Since the significance value is less than 0.5, the null hypothesis is rejected and alternative hypothesis is accepted which shows customer's education is an influencing factor of buying green products.

Conclusion

This study overcome the gap of previous studies and revealed various aspects of consumer's attitudes and their purchase intentions for willingness to buy green brands.

Table 6: The Result of Hypothesis testing

Hypothesis	Statements	Result
H1	Green Marketing initiatives are having significant impact on Green Brand	Accepted
H2	Significant relation between green Marketing efforts and Purchase Intention of green products	Rejected
H3	Demographics are an influencing factor in willingness to buy the green products	Accepted
H3a	Income is having impact on willingness to buy the green products.	Accepted
H3b	Education is having impact on willingness to buy the green products.	Accepted

The major chunk of respondents is aware about green initiatives of brand but they do not consider environmental concerns while buying these products which shows that unawareness is not a factor for consideration of choosing these products. The green brands are costly, requires education level to understand the benefits of usage. Sometimes the consumers are skeptical towards the green promotion and green products are not available like non-green products. Despite of having positive attitude customers are not showing positive purchase intention which reflects the responsible factors like a new concept in FMCG goods, faulty promotions, costly products and unavailability of these products in the market.

Managerial Implications: The study concludes the customer's positive attitude towards green marketing initiatives but their willingness to buy those products are not same so Managers should adapt the green marketing mix in such a manner that would close the gaps related to promotions, distribution, product and pricing. The consumers should consider green products while taking buying decision and show their willingness to buy it regularly. The study revealed that a requirement of 4 A's Model i.e. Affordability, Acceptability, Availability and Awareness is required for green marketing initiatives of Brands.

This research is having certain limitations of the study like lack of time and financial resources, the researchers couldn't cover all area related to green consumerism and buying behavior. Though, the study is giving a base for further researches for future where more attitudinal and behavioral factors can be analyzed from customer's point of view.

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ORAL PRESENTATION-6

Employee Green Behaviour and Ethical Leadership: A Relational Aspect in Organizational Sustainability

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Abstract: Environmental sustainability is fast becoming an indispensible concern for business conduct, growth, and endurance in the twenty-first century. The paper contributes to the ongoing discussion of pro-environmental behaviour of employees by introducing the construct of ethical leadership. As climate change is one of the biggest concerns of the world, organizational leaderships are constantly facing challenges to make the organizations more environmentally sustainable. It has been cited continuously that, human actions are the key motivation of environmental issues and corporate crucially contribute to this environmental issues, but studies that explore workplace pro-environmental behaviours remain limited. Random sampling technique has been used in collecting data from a sample of 105 employees working in different organizations based in West Bengal. Adapted versions of questionnaires, namely, ethical leadership questionnaire (EQL) by Yukl et al. (2011) and pro-environmental behaviour survey measure by Zibarras and Ballinger (2011) have been used in measuring ethical leadership and employee green behaviour respectively. Results of regression analysis indicated a relationship to exist between the two study variables. The findings of this study extend research on the efficacy of environmentally-specific ethical leadership by shedding new light on the mechanisms that link them with employee green behaviour.

Keywords: Environmental Sustainability, Ethical Leadership, Green Leadership, Organizational Sustainability, Pro-Environmental Behaviour.

Introduction

Organizations are constantly encouraging employees to involve in Pro-Environmental Behaviour (PEB). Research interest in PEB of employees is also on the rise, but bridge between academic work and interventions delivered in the workplace are lacking. Mere adoptions of traditional environmental measure by the organizations are not sufficient to address the concern. This has been well understood that it is a collective responsibility to conserve environment, in order to survive. The environmental problems are partly caused by environmental behaviour, which refers to any behaviour that has an impact on the environment, both good and bad (J. Thogersen 2005; T.L. Tudor 2011). Research has been conducted on understanding and encouraging Pro-Environmental Behaviour, that is, behaviour that has minimum detrimental impact on environment or even prospers it (J. Thogersen 2005). Currently, sustainable behaviour of employees in workplaces is documented through various terms like Pro-Environmental Behaviour, Employee Green Behaviour (EGB). This PEB or EGB can highly depend on the organizational leadership. Organizational leadership and leadership are the two key ingredients of employees' PEB, and suggest companies to adopt further course of action (Robertson and Barling 2012). The environmental degradation can be reduced and prevented by enhancing pro environmental organizational behaviour that includes recycling, conservation, and reduction in waste behaviour which may further lead to greening of organizations. The necessity of behavioural modification of human beings towards green behaviour is well identified by researchers, who indicate how the need for factual research that encourages pro environmental organizational behaviour can be attained. In order to fully respond to environmental threats, it has been argued that significant leadership change and transformation towards environment is utmost need for the organizations. The primal idea is that, organizations will have to develop an environmentally-oriented ethical leadership when leading towards organizational sustainability.

In this study, ethical leadership serves as an essential supporting structure for the encouragement of environmental awareness and its effect on PEB at workplace, as it is convinced from the studies that organizational ethical leadership impacts a spectrum of established organizational issues, such as employee attitude, commitment, and financial performance of the organization, as a whole it reflects the values of the company and its employees most truthfully (Barling, Christie & Hoption 2010). Similarly, PEB can be defined as a behaviour that cautiously tends to decrease the adverse impact on the environment (Kollmuss and Agyeman 2002). As employees contribute most of their time in office, it is expected that workplace PEB will decrease the negative impact of employee's behaviour on the environment. In order to encourage workplace PEB, the study concentrates on specific factor (organizational ethical leadership) that may impact pro-environmental organizational behaviour.

In diverse ways ethical leadership has been defined. According to Kanungo (2001), ethical leaders acts and behaves in a manner that help the employees, and simultaneously they desist from behaviours that can harm others. Brown, Trevino, and Harrison (2005) stated that the association of honesty, ethical guidelines, and fair treatment of members are the foundations of ethical leadership. Trevino and Brown (2004) suggested that promotion of ethical behaviour by following, moreover managing ethics and making everyone accountable for it is ethical leadership in its actual sense. According to Khuntia and Suar (2004) ethical leaders include honest principles in their viewpoint, values and behaviours. Previously, it was thought that the major source of successful leadership was personal traits, but recently emphasis has been given on identifying leadership behaviours. That is, successful leadership depends on suitable behaviours, skill and action, not personal traits. Generally leaders' use different types of skills namely, technical, human and ideal. Although these skills are correlative in application, they can be considered differently. If these three behaviours of the leaders are channelized towards green behaviour or environmentally sustainable behaviour, it shapes the form of pro environmental organizational behaviour.

On the other hand, PEB has been defined as a helping behaviour towards the environment (Unsworth, Dmitrieva & Adriasola 2013). According to Stern (2000) green behaviour is a behaviour that deliberately attempts in scaling down of the adverse impact of human activities on the world. Pro-environmental behaviour can be performed by any person by purchasing "green" products, recycling, and not littering, among other behaviours. Even though it may seem simple to act more environment friendly, not many people do as much as they could, which has lead to encourage large number of studies on finding how to motivate people to do so (Osbaldiston & Schott 2012). Similarly, when pro-environmental behaviours are undertaken in connection to individuals' job, they become EGB (Ones & Dilchert 2013). Ones and Dilchert (2012) defined EGB as measurable actions and behaviours that employees capture in or bring about that are related with, and confer to or detract from environmental sustainability. In other words, employee green behaviour can be a conductive behaviour regarding the environment, or may perform as a key element for bringing attention to this issue in the organizational context.

Based on the literature review, the study examines current empirical perspectives of how environmentally-specific ethical leadership might facilitate more sustainable organizational behaviour. It examines the association between environmentally-specific ethical leadership and PEB of employees.

Methodology

Procedure and Participants

The questionnaire study was conducted among 105 employees from different private and public sector organizations based in West Bengal. Participants were invited by email to respond in this study. The subjects of the study were both managerial and non-managerial employees (male and female) working across different job levels. Random sampling technique was used for the collecting data. The gender distribution was 70 % male and 30 % female. Respondents' age ranged between 25 to 49 years old. The educational qualification states, 57% had a master degree and the rest had graduation and engineering degrees. In our sample, we only included responses that had completed the full values scale. The data was collected from May 2017 until July 2017. About 78.2% of our respondents were from private sector organizations (including 40% from Information Technology sector and the rest from various other sectors like banking, sales, and marketing) and 21.8% from government sector organizations. There were variation in the income groups among respondents, within which 40% belongs to the income group of Indian Rupee (INR) 40001-60000, while 30% settles in INR 20001-40000 income group, and remaining 18% & 12% of respondents belong to income groups of below INR 20000 and above INR 60000 respectively. The Statistical Package for Social Science was used for analyzing and testing the relationship, in order to find the relative association between the studied variables.

Questionnaire

To test the relationship we used the scale built by Yukl et al. (2011), which included constructs from, leaders' environmental descriptive standards, environmentally-specific ethical leadership, compatible enthusiasm for the environment and pro environmental organizational behaviours. The basic components of ethical leadership scale was, honesty and fairness towards environment, behaviour intended to communicate or enforce ethical environmental codes, honesty in decisions and the sharing of rewards regarding environmental values. Workplace PEB scale was based on pro-environmental behaviour survey measure by Zibarras and Ballinger (2011). The questionnaire, used in collecting primary data for the study was segmented into three sections. The first section required respondents' demography such as gender, age, annual income and work experience. While the second set of questionnaire was used to measure environmentally-specific ethical leadership and finally third set was used to understand PEB of employees. The scales consisted of ten questions each. Five-point Likert scale was used for rating the items in both the scales (1 = strongly disagree to 5 = strongly agree).

Results & Discussion

Employees' Pro-Environmental Behaviour being the dependent variable had the mean score of 32.50 and standard deviation of 5.48, environmentally-specific ethical leadership, being independent variable had mean score of 35.67, and standard deviation of 5.72. The Pearson's correlation matrix (Table 1) shows that, ethical leadership had correlation of 0.743 or 74.3%, indicating the respondents' agreement that environmentally-specific ethical leadership does have influence on employee Pro-Environmental Behaviour.

Table 1: Correlations

		Pro-Environmental Behaviour	Ethical Leadership
Pearson Correlation	Pro Environmental Behaviour	1.000	0.743
	Ethical Leadership	0.743	1.000
Sig. (1-tailed)	Pro-Environmental Behaviour	--	0.000
	Ethical Leadership	0.000	--
N	Pro-Environmental Behaviour	105	105
	Ethical Leadership	105	105

To test the anticipative ability of the independent variable, the regression analysis was performed. All assumptions those are essential for a regression analysis, such as multi-collinearity, normality, treatment for outliers and others were considered before the test was conducted. Result from Table 2 shows the overall significance of the regression model (F = 140.58), implying the existence of a linear relationship between the independent variable and the dependent variable.

Table 2: ANOVA

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	3460.901	1	3460.901	140.589	0.000[b]
Residual	4909.099	98	24.793		
Total	8370.000	99	--		
a. Dependent Variable: pro environmental behaviour b. Predictors: (Constant), Ethical leadership					

The R^2 value (Table 3) of 0.513 means that 51.3% of the changes in the independent variable could be taken into consideration for the differences in the dependent variable. As we know that, in general, values of the regression coefficient beta represents the change in the outcome resulting from a unit change in the predictor and that if a predictor is having a significant impact on the ability to predict the outcome then this *b* should be different from 0.

Table 3: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.743[a]	0.513	0.511	4.979
a. Predictors: (Constant), Ethical Leadership b. Dependent Variable: Pro-environmental Behaviour				

To determine the influence of the independent variable on the regression model we look at its coefficients. Result shows that environmentally-specific ethical leadership is influential. Ethical leadership, where employees are consistently related to PEB at workplace due to the shared values by leaders, had the influence of 0.863 (Table 4). The outcome of the environmentally-specific ethical leadership factor could be explained by the fact their relationship is task oriented in nature. However, the study believe that as organizations become more aware and concern with environmental problems that are affecting them, this factor (environmentally-specific ethical leadership) will eventually play more determining role in contribution towards pro-environmental organizational behaviour.

Table 4: Coefficients

Coefficients[a]							
Model	Un-standardized Coefficients	Standardized Coefficients	Un-standardized Coefficients	T	Sig	95.0% Confidence Interval for B	95.0% Confidence Interval for B
	B	Std. Error	B			Lower Bound	Lower Bound
Constant	6.599	2.639	6.599	2.501	0.000	1.395	1.395
Ethical Leadership	0.883	0.075	0.883	11.815	0.000	0.736	0.736
a. Dependent Variable: pro environmental behavior							

The scales reliability was tested by Cronbach's alpha to assert well internal correlation of each item in the scale. A Cronbach's alpha above 0.7 is the indication a good internal reliability (Cooper & Schindler 2014). The Cronbach's alpha for ethical leadership scale was 0.87 (Table 5) and for PEB of employees scale was 0.75 (Table 6) which indicates a standard reliability on both the scales.

Table 5: Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	No. of Items
0.872	0.877	10
Ethical Leadership Scale		

Table 6: Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	No. of Items
0.750	0.753	10
Employee Green Behaviour		

Conclusion

The prime goal of the study was to examine the leadership effect on organizations environmental viability through their impact on workplace PEB. The study tested a relationship linking environmentally-specific ethical leadership and their pro-environmental organizational behaviours. The role of the environmental passion of employees is highlighted in the relationship. The study provided a convincing aid for the relationship, and other findings offer salient contributions to pro environmental organizational behaviour. Firstly, our discussions advance our understanding of ethical leadership with respect to PEB of employees. It points out to the role of environmentally-specific ethical leadership by implying that leaders' effect on their employees' green behaviour. The existence of the environmentally-specific ethical leadership can potentially play an important role, in dealing with one of the key elements of the current environmental scenario in organizations, relating to employees' PEB. The result of this study indicates the relationship between EGB and environmentally-specific ethical leadership. This implicates to the management and organizations that, environmentally-specific ethical leadership is a vital point of interaction between the EGB and the organizational sustainability.

Finally, organizations environmental awareness will highly depend on its leaders' share of environmental values. The existence of such values is a prerequisite for the success of the entire organization in encountering expectations. Therefore, organizational circumstances state that, encouraging workplace PEB may be beneficial to influence many dimensions of organizational outcomes.

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ORAL PRESENTATION-7

Global Scenario of the Whistleblower Act

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Abstract: Existence of an Act does not ensure that it will successfully achieve the desired objective. Raising one's voice against malpractice is an important step towards controlling and prohibiting the malpractices in their nascent stage itself. Thus, whistle blowing is considered as an important phenomenon for ensuring better governance in organizations. Whistle blower Act is expected to cover the related issues and provide them with the necessary protection. However, in spite of rise in the corruption level, instances of whistle blowing have not increased proportionately may be due to the lack in required protection assurance for the whistleblower. Though the informer seems to have a heroic representation in society, he has to face serious consequences too. Reprisal discourages an employee to come forward and raise voice. There should be a legal framework to cover such sensitive issue and motivate whistleblowers. The Many important economies of the world have passed dedicated Act or amended existing laws to cover the act of whistle blowing. However, few have also done this just to fulfil the recommendations of international conventions like UNCAC or OECD guidelines. This study is an effort towards identifying the existing legislative framework and the protection available to whistleblowers around the world including India.

Keywords: Legislative Framework, Malpractices, Protection, Whistle Blowing.

Introduction

Whistle blowers around the world have one common characteristic that they have observed malpractice in workplace and raised their voice voluntarily to combat such practice. Though the act of rising voice with public interest dimension is ethical and theoretically accepted by all (individuals, society and government), in reality it involves lot of complexity. Almost, all whistle blowers generally face similar dilemma about whether to raise their concern, to whom to raise the issue, what may be the consequences, will they be heard or shall they remain silent. The key reason behind such hesitation is the legal/legislative approach and its effective implementation by government. Therefore the act of whistle blowing is influenced by the effectiveness of whistle blower Act.

As the act of whistle blowing is significantly gaining attention around the world, many countries have adopted the required measures in multiple ways. Few incorporated it as a part of corporate governance codes, few established independent legislations, few amended existing laws to include appropriate clause wherever applicable, few in the planning process and few are yet to take a decision about it. In spite of such initiatives, numbers of countries have incorporated the whistle blowing provisions just for the sake of having the provision. Research indicates that all countries have to implement whistle blowing provisions in one way or the other to ensure better governance. This paper is an effort towards identifying the existing legal support available to the whistleblowers which may be as independent legislation or may be as a related provision included as part of an existing law.

U4 Anti-Corruption Resource Centre (U4ACRC)[1], in an article in 2009 stated that due to immense international pressure to adopt whistleblower laws, various related provisions have been incorporated in many international instruments(U4 Anti Corruption Resource Centre, 2009) Significant efforts are made to incorporate reporting by employees and their protection thereon. The

Organisation for Economic Co-operation and Development (OECD)[2] projects whistle blowing as, “manifestation of open organizational culture where public officials are aware of and have confidence in procedures to report their concerns.” It conducted a survey on existing whistle blowing related laws, policies, and organizational rules in the years 2000 and 2009. In the year 2000, only 21 countries had some form of whistle blowing mechanism whereas in 2009, 29 countries encouraged the act of whistle blowing through some form of legislation. International Corporate Governance Network (ICGN)[3] developed Global Corporate Governance Principles in 2009 mainly for implementation in public companies (International Corporate Governnace Network, 2009). It emphasized upon employee empowerment to make them more responsible towards organization. ICGN revised their report in 2014 where the whistle blowing clause has been kept as it is (International Corporate Governance Netwrok, 2014). United Nations Convention against Corruption (UNCAC)[4] promotes integrity, honesty and responsibility of public officials. Any unjustified treatment for whistleblower is also prohibited (United Nations Office on Drugs and Crime, 2004). The Council of Europe (COE)[5] included whistle blower protection in its civil law Convention on Corruption (The Council of Europe, 1999). The Inter-American Convention Against Corruption (IACAC)[6] emphasizes upon the identity protection of whistle blowers (Organization of American States, 2015). The African Union Convention on Preventing and Combating Corruption (AUCPCC)[7] held government responsible for instituting he clearly defined mechanism to deal with the disclosure of wrongdoings without any fear of reprisal (African Union Convention on Preventing and Combating Corruption, 2003). The South African Development Community (SADC) Protocol Against Corruption also delegated the task of establishing well defined whistle blower mechanism on government. It also suggested that pseudo whistleblowers should be punishable under law (South African Development Community, 2001).

Thus, it can be said that whistleblower can act as auxiliary monitor by identifying problems, and accordingly enforcing discipline in business environment (Claessens & Kodres, 2014).
Mostly, all the countries have ratified the UNCAC. It represents world’s first legally binding anti-corruption convention. Out of 175 countries, 140 have ratified UNCAC as on 1st April, 2015(United Nations Office on Drug and Crime, 2015).G20 represents an international group of 20 major economies of world who constitute 80% of world economy, business and population. OECD represents a forum to address issues related to globalization. Presently 34 countries have become member of OECD including developed nations as well least developed nations. The member

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New Zealand, China, Singapore, Malaysia, Turkey, Mexico, Argentina, Brazil and Russian Federation have piecemeal approach towards whistle blowing and the protection provision.
Due to restriction to wrong doers or effective protection to whistle blowers. In many cases, the legal provisions mentioned are in abstract form.

Being a signatory to UNCAC, to adopt the UN guidelines, they have incorporated the required provisions as part of other existing laws or as part of the corporate governance code. Due to restriction to wrong doers or effective protection to whistle blowers. In many cases, the legal provisions mentioned are in abstract form.

countries are committed towards serious global issues including corporate governance and corruption (Organization for Economic Co-operation and Development, 2015).

Developed countries such as the UK, the US, Canada, Japan, Australia have dedicated legislative approach towards whistle blowers and their protection. Few developing countries

Results & Discussion

Among G20 countries, only 10 have dedicated law on whistle blowing and have included the whistle blowing provisions in other Acts or laws (as per Figure 1 & Table 1). Thus, the legal framework for whistleblowers in G20 is apparently strong.

Figure 1: Whistle Blower Legislation Status in G20 Countries

Table 1: Whistle Blower Legislation Status in G20 Countries

Dedicated Legislation Including Clause in Other Legislations	Australia, Canada, China, India, Japan, South Africa, Republic Of Korea, United Kingdom, United States Of America, European Union[10]
Only as Clause in Other Legislations	Argentina, Brazil, France, Germany, Indonesia, Italy, Mexico, Russia, Turkey[9]
Don't Exist	Saudi Arabia[1]

Among 34 OECD countries, 12 have dedicated laws and 19 have incorporated whistleblower provisions in other Acts or laws (Figure 2 & Table 2). This indicates that the legislative framework for whistleblowers is satisfactory state among OECD countries.

Figure 2: Whistle Blower Legislation Status in OECD Countries

Table 2: Whistle Blower Legislation Status In OECD Countries (34+Eu)

Dedicated Legislation Including Clause in Other Legislations	Australia,Canada, Hungary, Ireland, Japan, Netherlands, New Zealand, Republic of Korea, Slovenia, United Kingdom, United States of America, European Union[12]
Only as Clause in Other	Austria, Belgium, Chile, Czech Republic, Denmark, Estonia,

Legislations	France, Germany, Greece, Iceland, Israel, Italy, Luxembourg, Mexico, Norway, Poland, Portugal, Slovak Republic, Sweden, Turkey[19]
Don't Exist	Finland, Spain, Switzerland[3]

For European Union, out of 26 countries, only 6 have dedicated laws for addressing whistleblower issues. However, 17 countries have incorporated it as a clause in other Acts or laws. Hence, the state of legislative framework is satisfactory. Only 3 countries are yet to implement the relevant Act or clause for the informers (Figure 3 & Table 3).

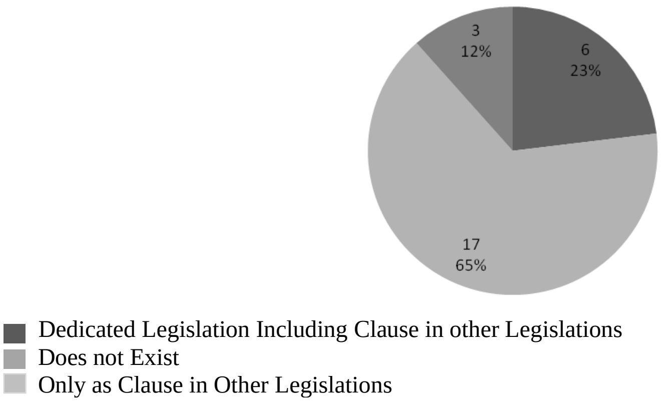


Figure 3: Whistle Blower Legislation Status in European Union

Table 3: Whistle Blower Legislation Status in European Union (26)

Dedicated Legislation Including Clause in Other Legislations	Hungary, Ireland, Netherlands, Romania, Slovenia, United Kingdom[6]
Only as Clause in Other Legislations	Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, France, Germany, Greece, Lativia, Luxembourg, Malta, Poland, Portugal, Slovak Republic, Sweden[17]
Don't Exist	Finland, Lithunia, Spain[3]

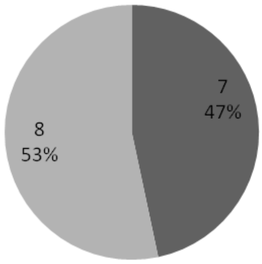
The developed countries have shown a very enthusiastic approach towards whistle blowing legislation formulation. Out of 19 countries, 11 countries have dedicated Act and 8 countries have incorporated it as a clause under other Acts (Figure 4 & Table 4). There is none who has not formulated the whistleblower legislation.

Figure 4: Whistle Blower Legislation Status in Developed Countries

Table 4: Whistle Blower Legislation Status in Developed Countries[19]

Dedicated Legislation Including Clause in Other Legislations	Canada, Japan, United Kingdom, United States, New Zealand, Australia, Hungry, Ireland, Netherlands, Romania, Slovenia[11]
Only as Clause in Other Legislations	France, Germany, Austria, Belgium, Denmark, Luxembourg, Sweden, Italy[8]
Don't Exist	--

Developing countries are also not behind in this context. Out of 15, 7 countries have dedicated laws and 8 have incorporated it as clause in other Acts (Figure 5 & Table 5).



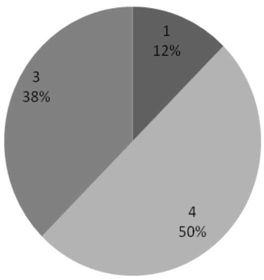
Dedicated Legislation Including Clause in other Legislations
Only as Clause in Other Legislations

Figure 5: Whistle Blower Legislation Status in Developing Countries

Table 5: Whistle Blower Legislation Status in Developing Countries[15]

Dedicated Legislation Including Clause In Other Legislations	China, Bangladesh, India, Malaysia, Republic of Korea, Ghana, Republic of South Africa[7]
Only As Clause in Other Legislations	Singapore, Indonesia, Pakistan, Turkey, Mexico, Argentina, Brazil, Russian Federation[8]
Don't Exist	[0]

Least developed countries need a lot of improvement in this regard. Out of the 8 countries studied, only 1 has framed a dedicated law to address the whistle blowing issues. Although 4 has included it as clause in other legislation, those are not much in use (Figure 6 & Table 6).



Dedicated Legislation Including Clause in other Legislations
Does not Exist
Only as Clause in Other Legislations

Figure 6: Whistle Blower Legislation Status in Least Developed Countries

Table 6: Whistle Blower Legislation Status in Least Developed Countries[8]

Dedicated Legislation Including Clause in Other Legislations	Uganda[1]
Only as Clause in Other Legislations	Nepal, Nigeria, Zimbabwe, Zambia[4]

Don't Exist	Afganistan, Bhutan, Haiti[3]

INDIA: Status of Whistle blower Legislation

India ratified UNCAC and is one among the G20 forum. The first Desirable Corporate Governance Code was developed in 1998. SEBI appointed Kumar Mangalam Birla Committee to prepare a draft about the corporate governance guidelines to suit the Indian corporate environment. The committee gave their draft report in 1999 and subsequently submitted their final report in 2000. Narayan Murthy Committee Report in 2003 introduced the concept of whistle blowing mechanism for the first time in India in the light of Sarbanes –Oxley Act 2002 of the US. The recommendation was incorporated in the Listing Agreement 2004 for public listed companies. However, it is now a mandatory part of the amended Listing Agreement since 2014.Corporate Governance Voluntary Guideline was framed in 2009. It mentions that companies should frame well defined whistle blowing procedure and ensure its proper implementation. The code also discourages retaliation and raises concerns about the protection of whistleblowers (European Corporate Governance Institute, 2014).
In India, Central Vigilance Commission (CVC) has been empowered to receive public interest disclosure. CVC can investigate the matter and give recommendations. It doesn’t have the power to give any judgment, enforce punishment or penalty. There is a strong civil society support for improvement and implementation of whistle blowing regulation in the country. NGOs such as Commonwealth Human Rights Initiative (CHRI), Transparency International India (TII) etc. are doing effective research in the area (Wolfe, Worth, Dreyfus, & Brown, 2014).

The latest development in India is the emergence of Whistleblower Protection Act 2011.The Act applies to public sector (The Whistleblowers Protection Act 2011). The Act clearly states the types of issues that can be raised under the Act and the mechanism to be followed for reporting. It also has stated a very encouraging point that is legal protection to whistle blowers. However, the desired level of accountability and transparency will be achieved only if the Act is implemented in true sense.

Observations

a) Federal / national laws / as provisions in other laws covering public sector employees are more in existence such as Canada, Germany, Austria, Belgium, Italy, Australia, Republic of South Africa, China, India, Mexico, Brazil, Russian Federation.
b) Very few countries namely the US, the UK, Republic of Korea, and Turkey covers both public and private sector employees under whistleblower legislation.
c) Among all the legislative approaches adopted by various countries, it has been observed that every country encouraged internal whistle blowing as against external whistle blowing.
d) Protection to whistleblowers is generally provided to those who report internally.
e) Every country has mentioned that external channels for reporting should be used only as last option.
f) Reward and recognition to whistleblowers have been widely accepted as a strong motivating factor for whistleblowers.
g) Frivolous reporting is discouraged and punishable under law.
h) Issues relating to national security, office secrets, armed forces and intelligence services are kept outside the scope of whistleblower laws around the world.

Conclusion

Dedicated national laws provide a comprehensive approach towards whistle blowing. It gives a clear idea towards the procedures to be followed and the protection available thereon. The piece meal approach always comes with limitations because introduction of a clause may not provide seamless coverage of the concerned matter. It can be considered as a beginner’s step towards whistle blowing issues. However, countries should take initiatives towards framing better legislation to encourage and protect the act of whistle blowing.

Institutionalized whistle blowing is very much beneficial to the organizations as it discloses workplace issues and saves the public image of the organization. Thus, organizations must take effective measures to ensure that confidentiality is maintained and the informer is protected from reprisal. This measure will motivate employees to come forward with their apprehensions using internal channels.

The protection should be extended to all the stakeholders of business. The rationale behind is that anyone who comes in touch with business regularly can provide valuable insights about actual functioning of the business and the grey area.

Recognition always encourages human beings to have consistent performance. Whistleblowers should be appreciated for raising their voice among other silent observers against wrongdoing and risking retaliation. Recognition in terms of physical, financial and psychological security can motivate existing as well as potential whistleblowers dramatically.

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ORAL PRESENTATION-8

Grievance Redressal Mechanism at Peerless: A Study

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Abstract: Environmental concerns have captured attention of the global communities for almost five decades now. Number of environmental issues in the 1980s-90s has placed environmentalism in the limelight. Efforts made by the environment activists have created consciousness about preserving nature and the environment amongst the mass. Effective use of natural resources and preservation of the environment has led way to a concept called green consumerism. Industry also looks for environment friendly propositions to offer and to go for sustainable marketing. Industries have started working on the various business operations like green-manufacturing or designing green products, processes, green-advertising and promotion, green-pricing, green-logistics and green-marketing etc. keeping eco-friendliness approach in mind. The paper investigates the level of green consumerism in the society with an objective to understand the impact of the green marketing efforts on the consumer attitude and their purchase intention for the environment friendly products. The findings of the paper revels that Income and Education influence the consumer's purchase intention. There is not a significant relationship between green marketing efforts and consumer's purchase intention. The study will clarify the consumer's attitude and purchase intention towards green marketing efforts as well as corporate to follow appropriate green marketing strategy.

Keywords: Consumer Attitude, Green Consumerism, Green Marketing, Sustainable Marketing

Introduction

A grievance can be defined as any sort of dissatisfaction, which needs to be redressed in order to bring about the smooth functioning of the individual in the organization. Broadly, a grievance can be defined as any discontent of dissatisfaction with any aspect of the organization. It can be real or imaginary, legitimate or ridiculous, rated or unvoiced, written or oral; it must be however, find expression in some form of the other.
Discontent or dissatisfaction is not a grievance. They initially find expression in the form of a complaint. When a complaint remains unattended to and the employee concerned feels a sense of lack of justice and fair play, the dissatisfaction grows and assumes the status of grievance.

Usually grievance relate to problems of interpretation of perceived non-fulfilment of one's expectation from the organization. Aggrieved employees usually manifest defiant behaviour.

A grievance is a complaint. It can be formal, like an employee files grievance because of unsafe working conditions, or more of an emotional matter, like a grievance against an old friend who betrayed you.

A grievance is a complaint that may or may not be justified. Often a grievance is a complaint about something that breaks a rule or a law, like a grievance filed against a person who builds a fence in his front yard in a town that does not allow that. If that same neighbour plants flower he knows makes you sneeze uncontrollably, you might be unhappy about that, but this is the kind of grievance you can work out among yourselves.

Grievance in the traditional sense of the word is typically defined as a complaint against an employer by an employee for a contractual violation. Simply put, this means that an employee has a problem with his/her employer and feels the problem is legitimate based on the contract he/she has with the employer. However, not all grievances have to be contractual grievances.

Typically, labour unions have a grievance procedure by which they follow and the process of tracking that grievance can take many forms.

a) The employee usually files the grievance with a shop steward, grievance rep, or union/management official.
b) The grievance rep typically fills out a pre-defined grievance form and submits it to the union for processing.
c) The union typically files the grievance and all relevant hard copy documents into a filing cabinet or electronic database, like the IGS.
d) The grievance rep and the labour union officials are responsible for keeping track of the grievance meeting steps 1-Arbitration.
e) The meeting steps are usually defined in the contract between union and management and typically have timelines that must be met between each step.

Both union and management are responsible for keeping track of the grievance and also abiding by the contractual language that accompanies that grievance. Grievances can be filed on behalf of the entire union or on behalf of individual members/employees.

Issues of Grievances

Let's first look at some of the most common types of employee and workplace grievances. Keep in mind that a grievance can be real or imaginary, and employees file grievances for a range of issues that can be minor or major.

- *Pay and Benefits*: This is the most common area of employee complaints and grievances. These grievances may involve the amount and qualifications for pay increases, pay equity for comparable work within the organization, and the cost and coverage of benefit programs.
- *Workloads*: Heavy workloads are a common employee and workplace grievance. If you work for a company that is going through lean times, you may have been asked to take on more work without a pay increase. Perhaps your employer decides not to fill a vacant position and instead assigns additional work to you and your colleagues. Such situations lead to employee frustration and dissatisfaction.
- *Work Conditions*: A safe and clean work environment is crucial to employee satisfaction and motivation. Extensive state and federal regulations protect worker health and safety. Employees who believe a company is not following applicable regulations and guidelines may decide to file a grievance.
- *Union and Management Relations*: When unions represent employees, both the union and management must avoid unfair labour practices. These illegal acts involve threatening or coercive behaviour by either party designed to obtain an employee's loyalty or cooperation. The National Labour Relations Act specifies unlawful activities for employers and unions. For example, employers cannot threaten employees with termination if they vote for a union. Employees may file grievances when they experience unfair labour practices.
- *Employee's Rewards & Recognition*: Rigid and unfair work rules, too much work responsibility, lack of employee’s rewards and recognition programmes may be caused to create employees grievances.
- *Supervision*: Disposition of the boss/superior towards the employee perceived notions of

favoritism, nepotism. Bias etc.

- *Work Group*: Strained Relations or incompatibility with peers, feeling of neglect, obstruction and victimization.

What is a Grievance Procedure?

Grievance procedures are a means of dispute resolution that can be used by a company to address complaints by employees, suppliers, customers, and/or competitors. A grievance procedure provides a hierarchical structure for presenting and settling workplace disputes. The procedure typically defines the type of grievance it covers, the stages through which the parties proceed in attempting to resolve matters, individuals responsible at each stage, the documentation required, and the time limits by which the grievance must be presented and dealt with at each stage. The best-known application of grievance procedures is as a formal process outlined in labour union contracts.

Grievance procedures do not necessarily have to be so formal and elaborate, and in fact, overly formal grievance procedures often discourage the airing of disputes in a timely manner. In small businesses, the procedures may consist of a few lines in an employee manual or the designation of a single ombudsman to deal with problems as they develop. Peer review of employee concerns is another popular way to address grievances. On the other hand, some larger companies may create an entire department dedicated to fielding complaints from employees or customers.

Whatever form they may take grievance procedures are intended to allow companies to hear and resolve complaints in a timely and cost-effective manner, before they result in litigation. Knowing that formal procedures are available often encourages employees to raise concerns or question company policies before major problems develop. It also makes managers less likely to ignore problems, because they know that upper management may become involved through the grievance process. In union settings, grievances procedures help protect employees against arbitrary decisions of management regarding discipline, discharge, promotions, or benefits. They also provide labour unions and employers with a formal process for enforcing the provisions of their contracts.

Although having grievance procedures in place is important in both unionized and non-unionized settings, companies must support their written policies with consistent actions if they hope to maintain good employee relations. To make a grievance procedure work, all parties must approach it with the attitude that it serves their mutual interests. Ideally, an effective grievance procedure helps management discover and correct problems within an operation before they cause serious trouble. It can provide a vehicle through which employees can communicate their concerns to upper management.

For grievance procedures to be effective, both parties should view them as a positive force that facilitates the open discussion of issues. In some cases, the settling of grievances becomes a sort of scorecard that reinforces an "us versus them" mentality between labour and management. In other cases, employees are hesitant to use the grievance process out of fear of recrimination. Some studies have shown that employees who raise grievances tend to have lower performance evaluations, promotion rates, and work attendance afterwards. This suggests that some employers may retaliate against employees who raise complaints. It is vital that a company's grievance procedures include steps to prevent a backlash against those who choose to use them.

Typical Grievance Process

In a union environment, a typical grievance procedure begins with an employee presenting a problem to his or her immediate supervisor within a certain time period after the offending event has occurred. The supervisor then has a set amount of time to either respond or send the grievance on to be addressed by the head of the department. At this point, a union representative enters the negotiations on behalf of the employee. If the situation is still not resolved, the grievance continues up the chain of command to the plant manager and the president of the local union. If the labour union fails to follow the procedures at any point, the contract usually specifies that it must drop the grievance. Conversely, the company is usually obligated to resolve the grievance in the employee's favour if management fails to follow the procedures outlined in the collective bargaining agreement.

If the situation still cannot be resolved, the final step in the grievance process is for both parties to present their side to a pre-designated arbitrator. The arbitrator's role is to determine the rights of both parties under the labour agreement, and his or her decision is usually final. The labour contract generally specifies the type of arbitrator used the method of selecting the arbitrator, the scope of the arbitrator's authority, and the arrangements for the arbitrator's payment. A potential intermediate step involves presenting the grievance to a mediator, whose job is to help the parties solve their own differences before they reach the formal arbitration phase. Mediation is usually less time consuming and expensive than arbitration. In addition, the mediator may be able to teach the two parties dispute resolution skills that may be helpful in solving future problems.

Purpose

This procedure is designed to provide a framework for the quick and effective resolution of difficulties that may arise in the workplace, through open communication and discussion between colleagues.

The aim of the procedure is to ensure that employees who feel aggrieved about the way they have been treated, either by management or by their colleagues, are given the opportunity to express their views and to have the issues resolved in a fair and speedy manner. The procedure seeks to achieve solutions through appropriate informal methods prior to the use of the formal processes, and is concerned to achieve a mutually acceptable resolution rather than to establish guilt or innocence. The procedure does not provide for sanctions against anyone involved. A separate procedure exists to deal with disciplinary issues.

Scope

This procedure applies to all employees of the University other than the Vice-Chancellor and Registrar. A grievance may be raised about any matter concerning work or conditions of employment other than:

a) The outcome of any case in which the disciplinary procedure has been used
b) Salary or grading appeals, where an alternative procedure has been established
c) To deal with such issues and
d) The rules of the pension schemes of which the employees of the University are members.

Where separate procedures have been agreed to deal with specific types of grievance (e.g. harassment or ‘whistle blowing’) employees may opt to use them instead of this generic procedure. Where a grievance involves collective issues of principle, it should be referred through a recognized trade union to the Joint Staff Committee.

Principles

A grievance may be raised personally by an employee or through a trade union representative, or a fellow employee.
An employee has the right to be accompanied by a fellow employee, friend or trade union representative at all meetings within the formal stages of the procedure. Since the purpose of the procedure is to secure a mutually acceptable resolution of a grievance, meetings will be arranged for dates and times when all those involved can be available.
If it is not possible to respond within the time limits in this procedure, the employee should be given an explanation for the delay and told when a response can be expected. The time limits may be varied by mutual agreement.

When an employee wishes to raise a formal grievance against their immediate manager, it should be raised with the next higher level of management and the procedure will start at the appropriate level. The manager against whom the grievance has been raised will be notified of the grievance by the person with whom it has been raised.

In cases where an employee wishes to raise a grievance against another employee, it should be raised with the immediate manager of the employee concerned. The manager will inform the employee that a grievance has been raised and provide the employee with information as to the broad nature of the complaint.

Where a group of employees wish to raise the same grievance and feel that it can be dealt with collectively, they may opt to appoint a spokesperson for the group. The procedure will be followed as for individual grievances, and all communications will pass through the appointed spokesperson. It will be for the spokesperson to communicate with the rest of the group about the progress of the case. In such cases, it is not necessary for all those involved to be present at meetings, and appropriate representative numbers should be agreed at each stage. To initiate a collective grievance, the issue should be raised with the manager responsible for all the employees concerned and the procedure will start at that level.

As soon as a manager receives notification of a formal grievance, the link HR Business Partner should be informed, and it is for the HR Partnership team to provide appropriate advice and guidance on handling the grievance.

It will be a serious disciplinary offence to encourage any employee to give a misleading statement or to withhold evidence in the course of an investigation.

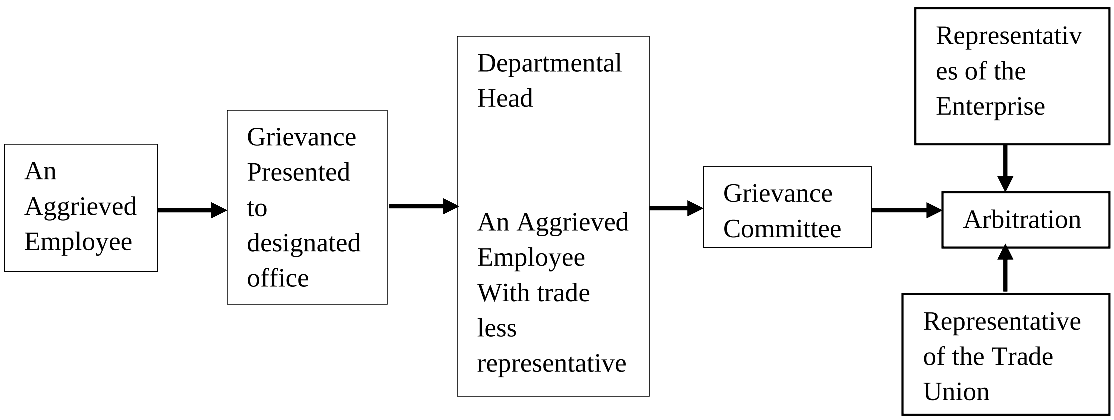

Figure 1: Model Grievance Procedure

Grievance Redressal Mechanism at the Peerless Financial Products Distribution Co. Ltd.

The Grievance Redressal Mechanism which is in operation in Peerless is named as Grahak Sunaiyee, it provides services for our valuable customers where customers can put up their Grievances through personal visit to the nearest Branch office or put up their grievances through postal, phone, Emails, Branch Complaint Boxes or other source of communication regarding their Cheques/DD clearances, Non-Receipts of Policy Pack, Error in policy, pending policy, claim status, Underwriting etc. The company has introduced the reduced working days TAT (presently seven working days previously it was 11 working days) from this financial year 2015-2016. The full form of TAT is Turnaround Time**.** It is time span within which the sector ensures Redressal of the grievances cropped up at the end of customers.

Salient Features

a) Recording in system only after spot study and if unresolved at Branch.
b) Grievance ID will be system Generated at the time of data entry.
c) Name will be populated from Policy Master.
d) Grievance Nature – Group/Sub-group of Grievance will be selected from list.

e) Case origin will be provided through customer's personal visit/complain Box/Postal or they can register their Grievances through phone calls or emails.
f) Lodge Date will be system Date.
g) Assigned to will be populated at the time of Entry by USER Code.
h) By default Action Status will be On Process. If Action status is forward, then it will be assigned automatically to the Next Level.
i) For Monitoring of Grievance, List of Unresolved Grievance will be shown with details of Grievance and No. of Days Pending. User can select anyone to take the Action.
j) By selecting a Grievance for Action, the details of Grievance with all history records will be displayed with last one as editable for the corresponding user.
k) Acknowledgment Slip will be printed during grievance entry.
l) SMS will go to Respective Customer after close of the Grievance.
m) System generated intimation (mail) in case of delay beyond TAT at each level.
n) Grievance Closure Letter can be printed from branch after close of grievance.

Statutory Norms

As per Company's Act.1956, Company having 100 or more workers or customer base should have a Grievance Redressal Mechanism system.
As per IRDA circulars from and onwards 01/04/2016 every Principal Insurance Company as well as Corporate Agent should have Grievance Redressal Mechanism system.

Process & Steps of GRP (Model of Flow Chart)

Service Providers Raises grievances through written → Received these grievances by Branch official & acknowledge and capture data into system → if unsolved at Branch, it forwarded to the next level (In charge of GRP, HO) →If unsolved, Forwarded HOD → to Technical Dept. (Named as IT&CS) → Approval from HOD → Resolution with TAT → Communication to Grievance Owner & Closing of Grievance.

Benefits, Grahak Sunavaiyee

a) Customers or service providers can log or register their complains by phone calls or emails to their valuable time.
b) A platform to effectively direct our Non Sales Service efforts for meeting standards & codes set forth in our circulars.
c) Creating Awareness on our service commitment.
d) Higher motivation through time bound remedies.
e) Deployment of TAT driven system defined process.
f) Transparency.
g) Tracking / monitoring of logged-in query / grievance under different product verticals.
h) Monitoring through system triggered alerts.
i) MIS – for monitoring / actionable at Branch –HO.

Objectives of the Study

The present study is directed to achieve the following objectives:
a) To evaluate the operational effectiveness of customer's/Service Provider's complaint Redressal Mechanism; including in house and various customers/Service Provider's forums available for GR.
b) To know the perception of the customers/SP on the quality of Redressal of their complaints and grievances.
c) To assess the overall satisfaction level among customers/SP on the services provided by the organisation to redress complaints or problems.
d) To generate & establish a transparent Grievance Redressal Forum by organising people feedback method to resolve the disputes /complaints of any person in respect of implementation of the software through system.

Research Methodology

The study is based on secondary data available in public domain. Data has been collected from different websites, books, journals, periodicals etc the details of which has been duly incorporated in the reference section. The period of study is last three years. It could have been better if primary data could have been collected from the all concerned stakeholders.

Results & Discussions

The study ends with following major observations:

- Organization is very much active to solve grievances
- The customers & service providers are more or less satisfied with the GRP
- The GRP which is functioning is an effective mechanism
- Every effort is taken to redress the grievances crept up at the end of service providers at the earliest convenience.
- The time span for redressal is also very attractive as far as the GRP operating at other companies belonging to same industry.
- The grievances that are dealt with mainly relates to service fees, rewards & reorganization for a particular period which occurs as a result of system difficulty that is in operation at the company under study. However it is significantly observed that the type of grievances that are being crept up changing from time to time as once a problem (related to system) comes into the notice of the company it takes immediate steps so as to prevent its recurrence and accordingly necessary modification is made in the system and the modified version comes into effect thereafter. So it happens that type of grievances gets altered and it is not repeated unattended.
- The company believes in the principle of "kaizen" which implies continuous development that approach is very much reflected from experience we had during the study regarding redressal of grievances by the company. It has been also ascertained that this Grivance Redressal Procedure is continuously in operation at the company from 2011 and the mechanism is subject to continuous modification & development as demanded by the situation. Before 2011 manual GRP was in operation.
- The introduction of this GRAHAK SUNAVAIYEE mechanism made it very easy for the company to unearth the areas relating to which major grievances of the customers centres round. As a result it has also enabled the company to ensure quick disposal of the reasons which are at the root of major grievances and provide better service to our valued customers and service providers.
- This system is subject to annual audit by both internal and external agency.
- The efficacy with which an official can redress a grievance is directly linked with Employees annual performance development plan or performance appraisal of the incumbent.

Conclusion

The instant study comes to and with the following suggestions & recommendations:

- In-house training programmes to all users (Internal & External)
- Setup a Separate Dept./Cell or call centre for different Zones/Regions to attain the problems to prevent linguistic problems.
- Setup a core committee including management & IT professionals to suggest the development of the system by monitoring & supervising the problems to identify the nature & commonness to prevent to appear the similar types of problems year after year.
- Company should arrange to send time to time alert or SMS to our desired Customers/SP regarding the status of their grievances or logged complaints to their phones.
- The expert committee member will study in dept the current mechanism and introduce a window where they can collect the feedback from all the users about the limitations &

implementation the better way to overcome from the limitations to provide top quality & satisfactory services to our valuable customers & service providers.

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ORAL PRESENTATION-9

Job Insecurities of Indian Workers - An Empirical Analysis with Unit Level Data

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Abstract: This study uses the National Sample Survey data on Employment and Unemployment for 2004-05 and 2011-12 to estimate the extent of job security in the Indian labour market among both formal as well as informal employees. We have considered availability of written job contract as a proxy of job security. That is workers not receiving any written job contract suffers from the risk of being evicted from their work whereas those receiving written job contract for longer period are secured enough. The percentages of workers with and without written job contract during 2004-05 have been calculated and compared how far this estimate has changed during 2011-12. The extent of job insecurity across various dimensions has also been figured out. Apart from that we have used logistic regression model to estimate the determinants of job insecurity. The results show that the extent of job insecurity has been significantly increasing overtime. However, the extent of job insecurity is lower among skilled and qualified workers. Moreover, compared to that of the male workers, female workers have lower job insecurity.

Keywords: Job Security, Labour Market, India

Introduction

During the post reform period, Indian labour market witnessed massive deterioration in the quality of employment opportunity. The labour market of our country which was already dominated by informal employment during the pre- reform period experienced further enhancement of these types of jobs during the post reform period (Goldar et al. (2010); Sanyal et al. (2009). Besides, it is extremely heartrending that majority of the new jobs that were created during this time were not only non-standard employment but also have extremely poor remuneration, worse working conditions (work in unhealthy environment and for long working hours) and little job securities (Papola, 2008; Sundaram, 2008). In most cases these workers hardly get any type of social security benefits and seldom gets any formal written agreement. Needless to say that these workers who do not get any written job contract suffer from job insecurity and are subject to eviction any time without any prior notice. In this paper availability of written job contract has therefore been considered as a proxy of job security.

These types of workers are scattered both in formal as well as informal employment. Srivastava, (2016) confirmed that percentages of these workers without written job contracts and high job insecurity increased from 2004-05 to 2011-12 in most of the industries. Bhandari et al (2006) using data from a labour survey explained that both productivity related attributes and institutional attributes are responsible for workers' insecurity. Not only that extent of job insecurity has been greater among the permanent workers than contractual workers. According to the daily The Hindu(published on 28th August, 2014), a recent survey concluded that most of the casual workers hardly get any written job contracts. Even more than 60 percent of contractual and regular salaried workers face the same problem. A sector-wise analysis initiated by recently released report on fifth annual employment unemployment survey (2015-16) shows that percentages of workers with no written job contracts was higher in the urban areas for both regular and contract workers. Unfortunately we are not confronted with plethora of literatures highlighting the aspect of job insecurity among the workers who do not get any type of written agreement.

In this paper our objective is to investigate the incidence of employment with and without any type of written job contract during the post reform period across different educational qualification, technical qualification, social groups and social religions. Apart from that we have also looked into the concentration of employment with and without job security among public and private sectors during the post reform. In order to carry out this analysis we have used household level data from 61st and 68th survey rounds on employment and unemployment survey conducted by National Sample survey office (NSSO).

Objective of the Study

- Incidence of job insecurity during the period 2004-05 and 2011-12
- Incidence of job insecurity is lower public sector jobs as compared to other sectors.
- Incidence of job insecurity reduces among higher qualified people.
- Probability of being insecured is higher among female workers as compared to male
- Incidence of job insecurity is higher among scheduled caste and scheduled tribes.

Experience reduces the chance of job insecurity.

The rest part of the study is organized as follows. Section 2 describes the econometric methodology used in this study. Section 3 provides summary estimates of workers without job security across major dimensions. Section 4 interprets the estimated results of the econometric model used in this study. Section 5 summarizes and concludes.

Econometric Methodology

This chapter estimates the impacts of the major household specific and personal characteristics of the workers on the probability of the worker to have job security by using logistic regression model. In this study we have used logistic regression model because the dependent variable is qualitative in nature and unobserved. We have created an unobserved binary variable based on the nature of the latent variable.
A person will enter into the labour market without written job contract only when the person gets positive utility by supplying labour as informal worker. The utility function of the person is unknown that is why the dependent variable in the participation equation is unknown:

$$y_i^* = \sum_{j=1}^{k} \beta_j x_{ji} + u_i \qquad (2.1)$$

To estimate the model we have to create an observed binary variable based on the nature of the latent variable y_i^*.

$$y_i = \begin{matrix} 1, if & y_i^* \geq 0 \\ 0, if & y_i^* < 0 \end{matrix} \qquad (2.2)$$

Here $y_i^*$is the dependant variable which is taking binary values 0 and 1.0 indicates that the worker has written job contract and are not insecured while 1 indicates that the worker has not got any written agreement and hence suffers from job insecurity.

We have taken worker's education level, experience, technical knowhow, enterprise type along with social groups, social religion, gender, time i.e. year are the explanatory variables. These variables are qualitative in nature and so we have created dummy variables for each of these variables. Apart from that, another important independent variable is age of the worker. Considering a non-linear relationship between age and insecurity of the worker we have taken square of age as another important explanatory variable. Besides, we have also undertaken some of the important interaction dummy variables in order to understand how much incidence of job insecurity changes overtime among Muslims, scheduled tribes, postgraduates, females and government employees. We have as well considered interaction dummy variable in order to understand how much incidence of job insecurity changes among female schedule caste workers and female postgraduate workers.

We have constructed six dummies for each of the educational qualifications and enterprise types. Separate dummies are as well created for technical educated workers and female workers. Besides, separate dummy variables are also created for different social groups and religions. Not only that we have also constructed year dummy in order to understand the extent of workers' job insecurity among different dimensions changes with time. Furthermore, interaction dummies among different variables are also created in order to understand the incidence of job insecurity in greater detail.

The following model is estimated separately for rural and urban area.

$$y_i^* = \alpha_0 + \sum_{j=1}^{6} \alpha_j x_{1ij} + \beta_1 x_{2i} + \beta_2 x_{2i}^2 + \gamma x_{3i} + \sum_{k=1}^{6} \theta_{ki} x_{4ki} + \sum_{l=1}^{3} \phi_l x_{5il} + \sum_{m=1}^{3} \delta_m x_{6im} + \pi x_{7i} + \mu x_{8i} + \tau_1 x_{6im} x_{8i} + \tau_2 x_{5im} x_{8i} + \tau_3 x_{5im} x_{7i} + \tau_4 x_{7i} x_{8i} + \tau_5 x_{1ij} x_{8i} + \tau_6 x_{4ki} x_{8i} + \tau_7 x_{1ij} x_{7i} + u_i \quad (2.3) \qquad (2.3)$$

In a binary response model, interest lies primarily in the response probability

$$P_i = P(y_i = 1) = P(y_i^* > 0) = P\left(u_i > -\left(\beta_0 + \sum_{j=1}^{k} \beta_j x_{ji}\right)\right) = 1 - P\left(u_i \le -\left(\beta_0 + \sum_{j=1}^{k} \beta_j x_{ji}\right)\right)$$

$$P_i = 1 - F\left(-(\beta_0 + \sum_{j=1}^{k} \beta_j x_{ji})\right) = 1 - F(-z_i)$$

Here, $z_i = \beta_0 + \sum_{j=1}^{k} \beta_j x_{ji}$ and F is the cumulative distribution function of u. If the distribution of u is symmetric,

1- F(-zi) = F(zi)

Therefore,

$$P_i = F\left(\beta_0 + \sum_{j=1}^{k} \beta_j x_{ji}\right) = F(z_i) \qquad (2.4)$$

F is a function taking on values strictly between zero and one: $0 \le F(z) \le 1$, for all real numbers *z*.This ensures that the estimated response probabilities are strictly between zero and one. Various nonlinear functions have been suggested for the function *F*in order to make sure that the probabilities are between zero and one.

The functional form for *F* in (2.4) will depend on the assumption made about the error term *u*. If the cumulative distribution of *u*, is logistic we have what is known as the log it model. In this case

The left-hand side of this equation is called the log-odds ratio. Thus the log-odds ratio is a linear function of the explanatory variables.

Estimates of Availability of Written Job Contracts

We have calculated percentages of workers with and without written job contracts across different educational and technical qualifications, social groups and social religions for the time period 2004-05 and 2011-12. Workers hardly getting any written job contract prior to appointment mostly suffer from insecurity. On the other hand workers getting written contract from 1 year to less than 2 year, 1 year to 3 year and more than 3 years are much more better off.

Table 1 displays the percentages of workers with and without written job contracts during 2004-05 and 2011-12. During both the time period a large section of worker suffers from insecurity as they hardly get any written agreement. This figure is further increased overtime. Workers with more than 3 years job agreement has lowered overtime leading to the enhancement of risk and insecurity of the worker. However, concentration of workers with short term agreement is insignificant but increased marginally overtime.

Table 1: Percentages of workers with and without written job contract

Type of Job Contract	2004-05	2011-12
No written contract	74.7	79.78
Written job contract for 1 year or less	1.58	3.75
Written job contract for 1 year to 3 year	1.44	1.5
More than 3 year	22.29	14.98

Source: Author's Own Calculation From NSS 61st and 68th Round Unit Level Data

The following table highlights that during 2004-05, private sector employees suffered mostly from insecurities while large portion of the public sector workers were hardly facing the risk of being evicted. However, this situation drastically changed during 2011-12 leading to the increase in insecurity among public sector employees. Thus the picture of the workers' insecurity has been more or less same among the public and private sector employees during the latter period.

Table 2: Percentage of workers with and without job contract across public and private sector

Type of Job Contract	2004-2005		2011-2012	
	Public Sector	Private Sector	Public Sector	Private Sector
No written contract	26.23	58.81	56.88	64.6
Written job contract for 1 year or less	2.07	3.3	7.27	5.75
Written job contract for 1 year to 3 year	1.66	3.67	1.33	5.04
More than 3 year	70.04	34.23	34.52	24.61

Source : Same As Above Table

It is evident from table 3 that workers' job security and stability surely enhances with the increase in educational qualification and skill. Illiterate workers doing manual and unskilled jobs are mostly insecured in their workplace. Negligible proportion of these workers get written job contract. With the increase in skill and efficiency, incidence of insecurity falls. However, compared to 2004-05, 2011-12 witnessed increased risk and insecurity of the workers. Most importantly, risk and insecurity increased both among skilled and unskilled workers but percentage of workers without any written job contract slightly reduced among the illiterate workers overtime.

Table 3: Percentage of workers with and without job contract among different educational qualifications

		Type of Job Contract			
		No Written Contract	Written Job Contract for Year or Less	Written Job Contract for 1-3Years	Written Job Contract for More Than 3 Years
2002-2005	Illiterate	94.38	0.73	0.36	4.53
	Primary	88.11	0.92	0.73	10.24
	Secondary	64.87	2.54	2	30.59
	Diploma	39.58	3.26	3.61	53.55
	Graduate	37.8	3.17	3.06	55.97
	Postgraduate	32.13	2.51	5.21	60.16
2011-2012	Illiterate	92.84	3.93	0.24	2.99
	Primary	91.57	3.17	0.78	4.47
	Secondary	77.48	3.65	1.73	17.14
	Diploma	59.32	4.55	3.86	32.27
	Graduate	47.33	5.06	4.03	43.58
	Postgraduate	38.41	4.03	5.19	52.37

source: same as above table

Workers with technical knowhow are much more confident and secured in their workplace than the workers without any type of technical education. This is very evident because the former are efficient workers performing white collar jobs. However, both these types of workers faced decline in their job stability overtime.

Table 4: Percentage of Workers with and without Job Contract among Technically Educated and Technically Uneducated Workers

Type of Job Contract	2004-2005		2011-2012	
	No Technical Education	Technical Education	No Technical Education	Technical Education
No Written Contract	77.69	26.7	81.9	35.52
Written Job Contract for Year or Less	1.38	4.05	3.59	6.52
Written Job Contract for 1-3Years	1.19	6.45	1.27	6.94
Written Job Contract for More Than 3 Years	19.74	62.79	13.24	51.02

Source: Same as Above Table

Table 5 highlights that scheduled tribes and scheduled caste workers are mostly working in vulnerable working conditions without any job security. In fact among all other social groups, scheduled caste workers have the highest percentage of workforce working without any type of formal written agreement. Besides, large proportion of general workers also suffer from insecurity, but their situation is best among all other social groups. Furthermore, all the workers irrespective of different social groups experienced increase in the incidence of job insecurity overtime.

Table 5: Percentage of workers with and without job contract among different social groups

		Type of Job Contract			
		No Written Contract	Written Job Contract for Year or Less	Written Job Contract for 1-3Years	Written Job Contract for More Than 3 Years
2002-2005	Scheduled Tribe	81.73	0.77	0.77	16.73
	Scheduled Caste	82.25	1.3	0.69	15.69
	Other Backward Classes	78.54	1.49	1.31	18.65
	General	64.41	2	2.18	31.41
2011-2012	Scheduled Tribe	84.16	3.33	0.71	11.81
	Scheduled Caste	84.88	3.81	1.07	10.23
	Other Backward Classes	83.21	3.6	1.3	11.89
	General	69.34	4.05	2.37	24.24

source: same as above table

In Table 6 we find that Muslim workers are mostly working without any formal written job contract. Christian workers are much more better off in this regard. Concentration of workers without any written job contract have been have been lowest among them in comparison to the other religions. Situation of the Hindus are better off than that of the Muslims but worse off than the Christians. With the passage of time quality of job availability deteriorated among all the workers irrespective of their social religion. Employment increased devoid of any written agreement and hence increased insecurity among the workers.

Table 6: Percentage of workers with and without job contract among major social religions

Type of Job Contract	2004-2005			2011-2012		
	Hindu	Muslim	Christian	Hindu	Muslim	Christian
No Written Contract	73.61	85.47	69.56	78.52	90.01	75.76
Written Job Contract for Year or Less	1.62	1.15	2.4	3.88	2.54	5.29
Written Job Contract for 1-3Years	1.5	1.1	1.55	1.62	0.63	1.77
Written Job Contract for More Than 3 Years	23.27	12.28	26.49	15.98	6.83	17.17

Source: Same as Above Table

Determinants of Job Insecurity: Estimates Using Logit Model

It is shown in the estimated results that job insecurity is the result of workers' skill and efficiency, type of enterprises, experience and so on. Technically educated workers have significantly lower probability of being insecured in their workplace compared to that of the technically illiterate workers. However, workers with postgraduate and higher degrees hardly have significantly higher chances of getting any formal written agreement compared to that of the graduate and diploma holders. Though workers with graduate and diploma certificates have significantly higher chances of secured employment than lower qualifications. Thus it can hardly be claimed without any doubt that higher education enhances job security. Interestingly enough, post graduate and above qualified workers have undergone decline in the incidence of jobs without any formal written job contract.

Besides, we find that government employees have the lowest probability of working without any written job contract compared to that of the private employees and co-operative agency workers and so on. Though incidence of job insecurity increased among the government employees overtime. Furthermore, chances of insecurity in the workplace is significantly reduced with experience. We hardly find any non-linear relationship among experience and job security. Apart from that, compared to the male workers, female workers have 2 percent lower probability of working without any security and stability. This result is significant at 1 percent level of significance. However, chances of remaining insecured among them is enhanced with time.

Table 8: Estimated Results of Logistic Regression Model for Job Insecurity

Workers' Characteristics		Co-efficient
Constant	0.78	-
Educational Qualification: Reference Group is Graduate and Diploma		
Illiterate	2.31***	0.16
Informal Education	1.84***	0.10
Below Primary Education	2.00***	0.11
Primary	1.53***	0.10
Middle Education	0.79***	0.07
Postgraduate	0.09	0.01
Technical Education: Reference Group Is Technically Illiterate Workers		
Technical Education	-0.27***	-0.03
Enterprise Type: Reference Group is Government Employees		
Proprietary enterprise	3.01***	0.33
Partnership enterprise	2.08***	0.10
Private enterprise	1.15***	0.08
Co-operative enterprise	1.05***	0.07
Employers' household	3.53***	0.12
Other enterprises	2.88***	0.12
Age	-0.11***	-0.01
Age square	0.00***	0.00
Social Group: Reference Group is General Workers		
Scheduled tribe	0.48***	0.04
Scheduled caste	0.27***	0.03
Other backward classes	0.32***	0.03
Sex : Reference Group is Male Workers		
Female	-0.17*	-0.02
Year	0.39***	0.04

Religion: Reference Group is Hindu Workers		
Muslim	0.25***	0.02
Christian	0.17**	0.02
Others eligionR	-0.04	0.00
Interraction Dummies		
Muslim Year	0.03	0.00
St Year	0.10	0.01
Female Year	0.27***	0.03
Postgrad Year	-0.46***	-0.05
Govt Year	0.39***	0.04
Sc Female	-0.08	-0.01
Postgraduate Female	-0.10	-0.01
All above mentioned variables are the explanatory variables. Dependant variable is availability of written job contract. Number of observations: 127,025, Pseudo R^2 : 0.37 Marginal effect is the discrete change of dummy variable from 0 to 1.		

Conclusion

Indian labour market witnesses a gloomy picture so far as the availability of qualitatively better employment opportunities and creation of standardized employment are concerned. Job opportunities are available among those informal employment where the workers are not even getting any written job contracts at the time of their appointment. So, these types of jobs are not only extremely non-standard but also hardly provide any type of safety and security among the workers. What is much more alarming is that incidence of employment without any written job contract enhanced further from 2004-05 to 2011-12. Although, it is true that chance of getting secured and stable jobs increases with the increase in workers' qualification and efficiency, but we find insignificant result whether workers with postgraduate degrees have higher probability of getting insecured jobs than the graduate and diploma holders or not. However, the good news is that experience increases the probability of getting standardized and better employment opportunities. Furthermore, gender biasness hardly exists in the availability of secured jobs.

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ORAL PRESENTATION-10

E-Commerce: A New Era of Commerce in India

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Abstract: E-Commerce stands for electronic commerce and caters to trading in goods and services through the electronic medium such as internet, mobile or any other computer network. A person sitting on his chair in front of a computer can access all the facilities of the Internet to buy or sell the products. Unlike traditional e-commerce that is carried out physically with effort of a person to go & get products, e-commerce has made it easier for human to reduce physical work and to save time. It involves the use of Information and Communication Technology (ICT) and Electronic Funds Transfer (EFT) in making commerce between consumers and organizations, organization and organization and consumer and consumer. It is a new way of marketing a product/service globally to the targeted market around the world. With the help of e-commerce you can buy almost anything you wish for without actually touching the product physically and enquiring the salesman repeatedly before placing the final order. E-commerce promises better business for SMEs and sustainable economic development for developing countries. E-Commerce coupled with the appropriate strategy and policy approach enables small and medium scale enterprises to compete with large and capital-rich businesses.

Keywords: E-Commerce, EFT, ICT.

Introduction

The term "Electronic Commerce" or E-Commerce refers to the use of an electronic medium to carry out commercial transactions. Most of the time, it refers to the sale of products via Internet, but the term E-Commerce also covers purchasing mechanisms via Internet (for B2B).

Electronic commerce is a type of business model, or segment of a larger business model, that enables a firm or individual to conduct business over an electronic network, typically the internet. E-Commerce is the buying and selling of goods and services, or the transmitting of funds or data, over an electronic network, primarily the Internet. These business transactions are B2B, B2C, C2C or C2B. The term e-tail is used in reference to transactional processes around online retail. E-commerce is conducted using a variety of applications, such as e-mail, fax, online catalogs and shopping, carts, Electronic Data Interchange (EDI), File Transfer Protocol, and Web services. It can be thought of as a more advanced form of mail-order purchasing through a catalog. E-Commerce is the movement of business onto the World Wide Web (www). The effects of e-commerce are already appearing in all areas of business, from customer service to new product design. It facilitates new types of information based business processes for reaching and interacting with customers like online advertising and marketing, online order taking and online customer service.

India has emerged as one of the major players on the new international business scene. Its unstoppable economic growth since reforms in 1991 has become the focus of attention of researchers in the area of international business and management. The purpose of this paper is to review the growth of e-commerce on Indian Commerce that has been published in top business and management journals, with the aim of knowing what are the most influential papers, what are the issues that have received the most attention, which are the main findings or what more needs to be done in terms of research.

E-Commerce is not only limited to online sales, but also covers:

- Preparation of estimates online
- Consulting of users
- Provision of an electronic catalog
- Access plan to point of sales
- Real-time management of product availability (stock)
- Online payment
- Delivery tracking
- After-sales service

History of E-Commerce

The year 1991 noted a new chapter in the history of the online world where e-commerce became a hot choice amongst the commercial use of the internet. At that time nobody would have even thought that the buying and selling online or say the online trading will become a trend in the world. We are constantly looking forward to where digital will take us next, so we thought we'd stop and take a look at how far E-Commerce has already come.

1960s - 1990s: The Early Days of E-Commerce

E-Commerce started in the 1960s, when technological developments meant that data could be exchanged electronically for the first time, but fast forward to the 1990s, and this was the decade that online retailing really began to take off.

The '90s saw the first secure online purchases - one of which was a large pizza from Pizza Hut, and another was a Sting CD, sold by US retailer, Net Market on 11 August 1994.
Early 2000s: Introducing Broadband

Early 2000

In 2003, more than 20% of Americans had broadband in their homes, meaning that more people were beginning to have permanent access to the internet - and more access to online shopping. An article from E-Commerce Times outlined the effects of broadband on E-Commerce, and in 2003, online sales increased by 26%, and Amazon alone reported a 28% sales increase year-on-year.

However, the introduction of broadband to people's homes didn't only mean that more people were buying online, it also meant that people were starting to conduct more research before placing an order. With easy access to the internet increasing, the average time spent researching products and searching for more competitive prices also increased.

Key Brands in E-Commerce

E-Commerce giants, Amazon and eBay have been leaders in the industry since its infancy, and were amongst the first well known E-Commerce brands.

Amazon was a pioneer in affiliate marketing, meaning that they allow other websites to earn sales commissions for referring Amazon products to their customers. Amazon now generates around 40% of their total sales revenue from affiliates and sellers who list and sell their products through Amazon's website. The growth of PayPal (assisted by eBay's acquisition of PayPal and their later partnership with MasterCard) also transformed the way that consumers could make payments and shop online.

2010s: The Rise of Mobile Commerce

With the increase in Smartphone owners over the years, mobile devices have caused a shift in the way E-Commerce now operates.

Not only have online retailers had to consider the user experience for their mobile shoppers, in April 2015, the rise in mobile users caused Google to release a search algorithm update, referred to as 'Mobilegeddon'. This update was designed to give a boost in visibility to responsive, mobile-friendly sites and penalise sites which did not cater to their mobile users. However, as well as mobile users affecting search results and site visibility, the way users are using mobile is also causing a shift in shopper behaviour. Whilst online product research may have begun in the early 2000s, smartphones have taken this to a higher level - GE Capital Retail Bank found in a recent study that 81% of shoppers will now research a product before they buy it.

2010s: The Effects of Social Media

Social media has also changed how consumers shop with their chosen E-Commerce retailers. Social platforms have made brands much more accessible for their customers (consumers feel equal to brands on social, not below them), and has changed the way they communicate with businesses.

Consumers are likely to interact with brands on social before they decide to shop with them, and a brand's social presence can be highly influential in how shoppers perceive them. Consumers have higher expectations for brands on social and on digital generally. If a retailer doesn't meet these expectations, the internet, and social in particular, makes it very easy for consumers to move on to a different brand.

However, social has opened up brand new opportunities for brands to sell their products online. Facebook has 1.59 billion active users every month, and their boosting feature alongside the Facebook Buy Button means that businesses are now able to reach and sell their products to some of these users.

Future of E-Commerce

When we look at how drastically E-Commerce has changed over the past 20, or even 10 years, it's difficult not to be excited about the future of retail technology and how the experience for both consumers and retailers will continue to change.

Objectives of Study

The objectives of present study are:

- To study Trend of e-commerce in India
- To examine the factors enable e-commerce in India
- To find out thefactors of e-commerce in India
- To know the various challenges faced by E-commerce in India.
- To analyze the market size and Infrastructure.

Methodology

In this paper researcher has used only secondary data that has been collected from various articles, journals, books, websites etc. This has been used to study the conceptual framework, definition, present trends and some of the challenges and opportunities of e-commerce in India. All the data included is the secondary base and proper references have been given wherever necessary.

E-Commerce in India

India first came into interaction with the online E-Commerce via the IRCTC. The government of India experiment this online strategy to make it convenient for its public to book the train tickets. Hence, the government came forward with the IRCTC Online Passenger Reservation System, which for the first time encountered the online ticket booking from anywhere at any time. This was a boon to the common man as now they don't have to wait for long in line, no issues for wastage of time during unavailability of the trains, no burden on the ticket bookers and many more.

The advancements in the technology as the years passed on have been also seen in the IRCTC Online system as now one can book tickets (tatkal, normal, etc.) on one go, easy payments, can check the status of the ticket and availability of the train as well. This is a big achievement in the history of India in the field of online E-Commerce.

After the unpredicted success of the IRCTC, the online ticket booking system was followed by the airlines (like Air Deccan, Indian Airlines, Spice jet, etc.). Airline agency encouraged, web booking to save the commission given to agents and thus in a way made a major population of the country to try E-Commerce for the first time. Today, the booking system is not just limited to the transportation rather *hotel bookings*, *bus booking* etc. are being done using the websites like Make my trip and Yatra. The acceptance of the ecommerce on a large scale by the Indian people influenced other business players also to try this technique for their E-businesses and gain high profits. Though online shopping has been present since the 2000 but it gained popularity only with deep discount model of Flipkart. In a way it re-launched online shopping in India. Soon other portals like Amazon, Flipkart, Jabong, etc. started hunting India for their businesses. The role of geographic distances in forming business relationships is reduced. E-Commerce is the future of shopping. With the deployment of 3G and 4G wireless communication technologies, the internet economy will continue to grow robustly. In the next 3 to 5 years, India will have 30 to 70 million internet users which will equal, if not surpass, many of the developed countries.

Recent Trends in Indian E-Commerce

India is a massive E-Commerce marketplace now with every age group comfortably transacting online – more often preferring shopping online instead of visiting offline stores for a bigger gamut of choices and offers. E-Commerce industry is growing at an astounding rate in India and is expected to account for 1.61% of the global GDP by 2018. According to a report by Forrester, India is set to become the fastest growing market in the Asia-Pacific region with an expected growth rate of over 57% between 2012 and 2016.

a) Men in India shop 3X more than women While women continue to dominate the in-store markets, men with disposable incomes have taken it upon themselves to play the larger role in online shopping.
b) Cash-On-Delivery (COD) remains the most preferred online payment method. We Indians love the Cash-On-Delivery option; it gives us more control over online transactions since we don't have to pay until the product is at our doorstep. COD option during checkout has also been proven to boost impulse purchases.
c) 60% of online purchases happen during business hours. (9AM – 5PM) This proven trend is a myth-buster that shows how integral a part online shopping has become in our day-to-day lives. Marketers can use this fact to schedule their promotions across advertising channels accordingly.
d) The Rural Pitch Ecommerce companies would emphasize more on attracting the customers from rural areas. Along with this, traditional business houses such as Tata Group and Reliance Industries will enter more aggressively into the ecommerce business.
e) Smartphone Apps: However, users browse products on desktops or laptops, they prefer transacting via smart phones because of their faster linkages to payment gateways. Smartphone ecommerce apps are also preferred as they offer more personalized shopping

experience for customers and a better understanding of consumers for the ecommerce company. Further apps are also an opportunity to curate targeted promotions based on browsing or shopping cart history.

Factors Enable growth of E-Commerce in India

a) Customer convenience**:** By providing Cash on delivery payment option service to customers.
b) Replacement guarantee: Should be Offers 30 day replacement guarantee to their customers.
c) Reach: Enabling mobile-capable sites and supporting M-Commerce services.
d) Location based services: Since customers these days are always on the move, promoting the right product at the right time and location becomes an integral aspect
e) Multiple payment option: standard credit cards, debit cards and bank payments option should be there.
f) Right content: Getting the right content and targeting customers with crisp and relevant information is of utmost importance to users on the move.

Challenges Faced by E-Commerce in India

Some of the challenges faced by e-commerce in India are:

- Infrastructural Problems: Internet is the backbone of e-commerce. Unfortunately, internet penetration in India is so far dismally low at 0.5 per cent of the population against 50 per cent in Singapore. Similarly, penetration of personal computer (PC) in India is as low as 3.5 per thousand of population compared to 6 per thousand in China and 500 per thousand in US. Internet is still accessible through PCs with the help of telephone lines. Both cost of PCs and internet access in India are quite high.
- Absence of Cyber Laws: Other big challenge associated with e-commerce market is the near absence of cyber laws to regulate transactions on the Net. WTO is expected to enact cyber laws soon. The India's Information Technology (IT) Bill passed by the Indian Parliament on May 17, 2000 intends to tackle legislatively the growing areas in e-commerce.
- Privacy and Security Concern: To-day, quite vulnerable issues related to e-commerce are privacy and security. So far, there is no protection offered either by Website or outside watchdogs against hazard created by exploiting one's privacy.
- Payment and Tax Related Issues: Issues related to payment and tax is yet another problem continuously hinting e-traders. The electronic payment is made through credit card or plastic money which could, however, not become popular so far in India mainly due to two reasons. First, the penetration of credit card in India is very low (2 per cent of the population). Second, the Indian customers are quite skeptical of paying by credit card with the increasing threat of fraud played by hackers. Like elsewhere, credit card could not gain growth in India mainly because of authentification and recognition problems of electronic signatures.
- Digital Illiteracy and Consumer Psyche: Digital illiteracy is one of the formidable problems e-commerce is facing in India. Usually, the Indian consumer does not go long distances for having any good of his choice when a neighborhood store provides him whatever he wants. That is why the consumer does not browse the Net knowing the consequent hassles of connectivity and other botherations. Added to this is that building trust on the electronic media also takes long time more especially when the vendor is situated at a very far off place.
- Virus Problem: That computer virus is also a formidable problem in the execution of e-transactions is confirmed by the computer virus originated in Manila. A computer virus lagged' I Love You' originated in Manila, Philippines on May 5. 2000 rippling across world, inflected millions of computer files causing colossal loss of US $7 billion to the governments and the businesses. The offenders causing 'virus' must be awarded deterrent punishment, otherwise similar assaults in future can cause lasting blows to the quite young e-commerce in India as well.
- English Specific: Last but not the least, the software so far in the country is English specific. But, in order to make e-commerce reach to the small enterprises, it needs to be available in

the languages (regional) of the owners of the small enterprises to enable them to adapt e-commerce processes in their operations. Sooner it is done, better will be it for small enterprises to adapt e-commerce.

Results & Discussion

- The study indicates that e-commerce sector has huge growth potential in India
- Internet is the back-bone of e-commerce. But internet penetration in India is low compared to other countries.
- The growth of mobile internet is increasing in India.
- There are various factors responsible for slow growth of e-commerce in India.

Conclusion

E-commerce based on technology so Technology only responsible for business' success and survival. E-commerce is continuously progressing and is becoming more and more important to businesses as technology continues to advance and is something that should be taken advantage of and implemented. There are various factors that enable the growth of e-commerce and also there are some of serious challenges to be faced by the e-commerce industry.

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ORAL PRESENTATION-11

Study of Co-Integration among the Three Major Stock Indices of NIFTY

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Abstract: The inter connection between capital market indices are increasing over the year. A stock market is defined to be an efficient market when stock prices reflect simultaneously the new information appears in the market and, therefore, the current prices of stock reflect all traded and publicly available information about the stock. Recent research reveals that there are long term relationships between stock markets of different nations. Studies have also been done on the cointegration of stock indices within country. In this study we have try to investigate the cointegration among the three major Nifty broad Indices Nifty 50, Nifty Mid Cap 50 and Nifty Small Cap 50. All these indices have different market capitalisation. We have taken daily closing data of these indices from 1st January, 2011 and ending on 31st December, 2016. We have used test of stationarity for presence of unit root and Johansen Cointegration test to examine the presence cointegration among the indices. For short run causality we have applied unrestricted VAR model. The result confirms that there are no cointegrating relationships between the three indices. However, the VAR model indicates that there is short run causality in return between few indices.

Keywords: Data Stationarity, Johansen Cointegration Test, Stock Indices, VAR Modelling.

Introduction

The study of inter connection between capital market indices in the financial research is increasing over the year. A stock market is defined to be an efficient market when stock prices reflect simultaneously the new information appears in the market and, therefore, the current prices of stock reflect all traded and publicly available information about the stock. The efficient market hypothesis (EMH), in particular semi-strong form efficiency, which states that stock prices must contain all relevant information including publicly available information, In simple language, we can say that investor could not be able to utilized available information in order to forecast stock price movements so as to make a gain through stock trading. The present study tries to examine the co-integration between the Indian stock market indices in recent years. In this study we considered the three significant market indices Viz. NSE Small Cap50, NSE Mid Cap50 and NSE Nifty 50 (large cap), which have different market capitalization, to capture the long term connection between them. So that we can predict the movement of one indices with the help of information of other indices. Moreover, these three indices are considered the benchmark of Indian economic development. All the three indices have different level of market representation and if any sort of long term relationship can be identified between these indices, it may indicate the violation of Efficient Market Hypothesis and may also suggest that the indices are being driven by similar market forces. Market inefficiency allows investors to take informed decisions and earn big gains. Presence of co-integration will imply that certain market forces affect these indices in such a way that long term equilibrium is established between these indices.

Objectives

This paper is drafted to study the following objectives:

1. To check the stationary of time series data at level form and at 1st level difference of Nifty 50, Nifty Mid Cap and Nifty Small Cap.
2. To find out the co-integration between the above nifty indices (Nifty 50, Nifty Mid Cap 50 and Nifty Small Cap 50) using Johansan Co-integration Test.
3. To examine the inter relationship of short-run growth/ return between Nifty 50, Nifty Mid Cap and Nifty Small Cap by using VAR (Vector Auto Regressive) system.

Methodology

The above study is based on six calendars period starting from 1st January, 2011 and ending on 31st December, 2016. Data are downloaded from the website of National Stock exchange relating to daily closing stock indices of Nifty 50, Nifty Mid Cap 50 and Nifty Small Cap 50. Various time series statistical tools are utilized to study the above objective. All the calculations for co-integration analysis have been done on the natural logarithm of the index series which reduces the hetroscedasticity of time series data as log-transformation compresses the scales in which variables are measured. For checking stationarity of data we can use Augmented Dickey-Fuller Test and Phillips-Perron (PP) Test. However we use the first variant to test the unit root of the data. For the purpose of long term relationship between the indices we can use Engle-Garner Cointegration Test or Johansan Co-integration Test. However, we use here the Johansan Co-integration Test. Now to study the inter relationship in the variation among the variable we can use Vector Auto Regressive (VAR) model or Vector Error Correction Model (VECM). If the data at level form have co-integration we can use restricted VAR but if data are not co-integrated then we should use unrestricted VAR. The entire null hypothesis is tested using appropriate test statistics at 5% level of significance. The entire analysis has been done by using the E-Views Statistical Package.

A good number of literatures are available on the co-integration between Indian stock indices and with various stock indices of other developing and developed countries and also with other indicators, like foreign exchange market. Some of them are states briefly in the following paragraphs.

K. Kasa (1992), “Common Stochastic trends in international stock markets,” in Journal Monetary Economics, applied Johansen's co-integration test to study the association of stock markets indices and found that there is common trend in the developed capital markets of the US, Japan, Germany, Britain and Canada for the period 1974-1990.

A.K. Mishra (2002), “International Financial Integration of Domestic Financial Markets: A study of India,” in The ICFAI Journal of Applied Finance, found strong empirical evidence that there is strong correlations between NASDAQ index and the BSE index but found no co-integrating vector between the two.

M.V. Subha, and S.T. Nambi (2010), “A Study on Co-integration between Indi-an and American Stock Markets,” in Journal of Contemporary Research in Management, used Engle Granger test of co-integration to study long run relationship between American and Indian stock markets and confirmed that there is no significant co-integration between the two markets.

S. Ali, B.Z. Butt, and Kashif ur Rehman (2011), “Co-movement Between Emerging and Developed Stock Markets: An Investigation Through Cointegration Analysis,” World Applied Sciences Journal, identified short term correlations between the stock market of Pakistan with those of India, China, Indonesia, Singapore, Taiwan, Malaysia, Japan, USA and UK but not found any significant cointegration between these stock markets.

D. Gulati, and M. Kakhani (2012), “Relationship between Stock Market and Foreign Exchange Market in India: An Empirical Study,” Pacific Busi-ness Review International, used Granger causality test to determine relationships between INR/$ exchange rate and some Indian capital market indices but could not find any significant relationship.

R. MacDonald, and M.P. Taylor (1991), “Exchange Rates, Policy Convergence, and the European Monetary System,” in Review of Economics and Statistics, have proved long-term stocks co-movements among some developed equity markets.
Visal Deo (2014), “Investigating Cointegration between Some Indian Stock Indices”, in International Journal of Scientific & Engineering Research, have investigated the existence of co-integration between four indices of Indian stock market by using Engle-Granger test and Johansen

Co-integration test. Results confirm the presence of at least one co-integrating relationship between the four indices.

So the overall result from the review of literature is conflicting in each others. Moreover, no recent work has been on the particulars issues of long term relation and short term causality among the indices. In this paper we have tried to bridge the gap by study of Long-run and short-run Relationship among the Large Cap, Mid Cap and Small Cap Indices of NSE.

Conceptual Frame Work of Indices

The indices are designed to reflect the overall market sentiments. It is calculated based on free float market capitalization. National Stock Exchange is the one of the oldest stock exchange of India. A stock market index reflects the relative value of a group of stocks in numerical terms. When the constituent shares within stocks within an index change value, the index value changes. An index is important parameter to measure the performance of economy as a whole. There is several types of indices are constructed based on different characteristics, like market capitalization, nature of industry, nature of volatility etc. There are several types of indices like, broad market indices, sectoral indices, thematic indices, customized indices and many other indices. Furthermore, there are several sub indices under each of these categories. Our study is based on three most important indices under the category of Broad Indices in terms of trading volume and market capitalization. Such indices are Nifty 50, Nifty Mid Cap 50 and Nifty Small Cap 50.

The NIFTY 50 is a diversified 50 stock index covering 13 sectors of the economy from manufacturing to financial services. The NIFTY 50 Index represents about 65% of the free float market capitalization of the stocks listed on NSE as on March 31, 2016.

The primary objective of the NIFTY Midcap 50 Index is to identify the movement of the midcap segment of the market. NIFTY Midcap 50 includes top 50 companies based on full market capitalization from NIFTY Midcap 150 index. The NIFTY Midcap 50 Index represents about 5% of the free float market capitalization of the stocks listed on NSE as on March 31, 2016.

Table 1: Risk and Return of Nifty 50, Nifty Midcap 50 and Nifty Smallcap 50

Indices	Nifty 50		Nifty Mid Cap 50		Nifty Small Cap 50	
Base Period	November, 1995		January, 2004		April,2005	
Market Capitalization	Rs. 200bn to 3500bn		Rs. 50bn to 200bn		Less than Rs. 50bn	
	1Yr	5Yrs	1Yr	5Yrs	1Yr	5Yrs
Return (%)	27.09	10.52	53.9	12.27	55.03	13.02
Std. Deviation	13.22	15.27	19.48	22.27	20.52	22.15
Coefficient of Variation	48.80	145.15	36.14	181.50	37.29	170.12

The primary objective of the NIFTY Small Capital 50 Index is to capture the movement of the small cap segment of the market. The NIFTY Small cap 50 Index represents about 2% of the free float market capitalization of the stocks listed on NSE as on March 31, 2016. The respective risk and return of these three indices are given below. Out of these indices the return and risk is relatively high for Nifty Small Cap50.

Results & Discussions

A. To Check the Stationary of Time Series Data at Level Form and at 1st Level Difference of Nifty 50, Nifty Mid Cap and Nifty Small Cap.

Table 2: ADF Test Result at Level and at First Difference

Null Hypothesis: LNLC has a Unit Root		
Exogenous: Constant	t-Statistic	Prob.*
Augmented Dickey-Fuller Test Statistic	-1.73269	0.414467
Null Hypothesis: D(LNLC) has a Unit Root		
Augmented Dickey-Fuller Test Statistic	-32.8599	0.000
Null Hypothesis: LNMC has a Unit Root		
Augmented Dickey-Fuller Test Statistic	-1.41847	0.574501
Null Hypothesis: D(LNMC) has a Unit Root		
Augmented Dickey-Fuller Test Statistic	-32.9897	0.000000
Null Hypothesis: LNSC has a Unit Root		
Augmented Dickey-Fuller Test Statistic	-1.25446	0.65245
Null Hypothesis: D(LNSC) has a Unit Root		
Augmented Dickey-Fuller Test Statistic	-30.4603	0.000000
Test Critical Values	1% level	-3.43542
	5% level	-2.86367
	10% level	-2.56795

We have used the Augmented Dickey fuller Test to check whether they time series data are stationery at level form and at first level difference. For that purpose we can form the following hypothesizes:

a) Null Hypothesis: Daily Index data of Nifty 50, Nifty Mid Cap and Nifty Small Cap are not stationery.
Alternative Hypothesis: Daily Index data are stationery.

b) Null Hypothesis: Daily Index data are non stationery at 1st level difference.
Alternative Hypothesis: Daily Index data are non stationery at 1st level difference.

If p value is less than .05 we will reject the hypothesis and if p value more than 0.05 we accept the null hypothesis.

The results of the test are given in table 1. The result indicates that all the daily index data are not stationery at level form but stationery at first level i.e. I (1). The data has unit Root. This result indicates that we can move on with the two tests of co-integration.

B. To Find Out the Co-Integration between the Above Nifty Indices (Nifty 50, Nifty Mid Cap and Nifty Small Cap) Using Johansen Co-integration Test.

We can use the Error Correction Model to study the long term relationship among the Nifty 50, Nifty Mid Cap and Nifty Small Cap indices. But due to certain limitation of this model, we have used Johansen Co-integration Test. The hypothesis of the test is
Null hypothesis: No co-integration among the time series data.

The test statistics used for this purpose are Trace Statistic and Max-Eigen Statistic and they are tested at 5% level of significance. The decision rule is same as above. If p value is less than .05 we will reject the hypothesis and if p value more than 0.05 we accept the null hypothesis.

Table 3: Johansen Co-integration Test

Trend Assumption: Linear Deterministic Trend				
Series: LNLC LNMC LNSC				
Lags Interval (in First Differences): 1 to 1				
Unrestricted Cointegration Rank Test (Trace)				
Hypothesized - 0.05				
No. of CE(s)	Eigen Value	Trace Statistic	Critical Value	Prob.*
None	0.008478508	17.3879664	29.797073	0.6113
At most 1	0.003563109	6.84682324	15.494712	0.5955
At most 2	0.001959158	2.42781654	3.8414655	0.1191
Trace Test Indicates No Co-integration at the 0.05 level				
Unrestricted Co-integration Rank Test (Maximum Eigen value)				
Hypothesized - 0.05				
No. of CE(s)	Eigen Value	Max-Eigen Statistic	Critical Value	Prob.**
None	0.008478508	10.5411432	21.131616	0.69274
At most 1	0.003563109	4.41900669	14.264600	0.81267
At most 2	0.001959158	2.42781654	3.8414655	0.11919
Max-Eigen Value Test Indicates No Co-integration at the 0.05 Level				
* Denotes Rejection of the Hypothesis at the 0.05 Level				
**MacKinnon-Haug-Michelis (1999) p-values				

The result of Johansen Cointegration Test indicates that there ino cointegration among the indices at level form. If the variables are cointegrated or have long run relationship or association then we can run restricted VAR i.e. VECM (vector error correction model). But if the variables are not cointegrated among themselves we can't run VECM rather we have to use unrestricted VAR. Both the trace and the Max-Eigen statistics conclude at no cointegrating relationship between the three variables. The estimate of the cointegrating relationship between the variables can be seen in the following table.

C. To Examine the Inter Relationship of Short-Run Growth/ Return between Nifty 50, Nifty Mid Cap and Nifty Small Cap by using VAR (Vector Auto Regressive) System

VAR represents a proper simultaneous equation system in that all variables in it are treated as endogenous. In VAR modelling, the value of variables is expressed as a linear function of past or lagged values of those variables and all other variables included in the model. When there is simultaneity of relationship between variation in log nifty large cap 50(LNLC), log nifty midcap 50(LNMC) and log nifty small cap 50(LNSC), application of VAR is suitable. Before estimating VAR model, we have to ensure that all these variables are stationery, if these variables are not stationery, we have to make them stationery by differencing and differenced variables are to be used. Another issue in this respect is to determine the value of lag length, which is empirical question. From the table 3 it appears that values of AIC, SIC and HQC are all minimum at lag 1.

Table 4: VAR Lag Order Selection Criteria

Endogenous variables: D(LNLC) D(LNMC) D(LNSC)						
Lag	LogL	LR	FPE	AIC	SC	HQ
0	12757.28643	NA	2.19E-13	-20.638	-20.62558	-20.63333
1	12801.04088	87.22570*	2.07e-13*	-20.69424*	-20.64454*	-20.67554*
2	12803.99511	5.874986	2.09E-13	-20.68446	-20.59747	-20.65174
3	12808.17154	8.285286	2.10E-13	-20.67665	-20.55239	-20.62991
* indicates lag order selected by the criterion						
LR: sequential modified LR test statistic (each test at 5% level)						
FPE: Final prediction error/ AIC: Akaike information criterion / SC: Schwarz information criterion/ HQ: Hannan-Quinn information criterion						

In the Table 4 we have estimated VAR (1) model using the index data. The second column corresponds to results relating to Nifty large cap index equation, the third to nifty midcap index equation and fourth to nifty small cap index equation.

Table 5: Vector Auto-Regression Estimates

	D(LNLC)	D(LNMC)	D(LNSC)
D(LNLC(-1))	0.158120304	0.17999945	0.066166167
	(0.049175322)	(0.07235654)	(0.071105804)
	[3.21544]	[2.48767]	[0.93053]
	{0.001314*}	{0.012902*}	{0.352157}
D(LNMC(-1))	-0.131804293	-0.101294987	0.007168974
	(0.053046752)	(0.07805296)	(0.076703757)
	[-2.48468]	[-1.29777]	[0.09346]
	{0.013011*}	{0.194446}	{0.925541}
D(LNSC(-1))	0.063069849	0.074837327	0.10245309
	(0.048464662)	(0.07131088)	(0.07007821)
	[1.30136]	[1.04945]	[1.46198]
	{0.193217}	{0.294039}	{0.143831}
C	0.000408155	0.000495488	0.000442363
	(0.000277273)	(0.00040798)	(0.00040092)
	[1.47203]	[1.21449]	[1.10335]
	{0.141097}	{0.224638}	{0.269948}
R-squared	0.01070962	0.010692999	0.021776371
Adj. R-squared	0.008304538	0.008287876	0.019398194
Akaike AIC	-6.420799977	-5.6483719	-5.683245866
Schwarz SC	-6.404253119	-5.631825043	-5.666699009
Determinant resid covariance (dof adj.)	--	2.04E-13	--
Determinant resid covariance	--	2.02E-13	--
Log likelihood	--	12824.36516	--
Akaike information criterion	--	-20.69848976	--
Schwarz criterion	--	-20.64884919	--

On the basis of our result , it can be interpreted that higher return/growth (difference in log values of index will give the return from the index) in Nifty large cap 50 index [D (LNLC)] during period t-1 leads to higher growth of Nifty large cap 50 index in period t. Although the negative relationship indicated between growth in Nifty Midcap 50 [D (LNMC)] of period t-1 and return in Nifty large cap 50 index [D (LNLC)]. This is revealed through statistical significance by computed t value and respective p values of estimated coefficient. Same relation holds between growth of Nifty midcap 50 Index and its lag value. However, no other estimated coefficient appears to be statistically in any of the other equations. The high negative value of Akaike information criterion (-20.69) and Schwarz criterion (-20.648) indicates the appropriateness of VAR System.

To examine possible presence of autocorrelation in our VAR model, we have conducted the Autocorrelation LM test. The result, Table 6, shows that the computed LM statistic (which follows Chi-square distribution) is statistically insignificant (as p>.1) even for lag 1 which leads to acceptance of null hypothesis of absence of serial correlation in the VAR model that we have estimated.

Table 6: Auto Correlation LM Test

VAR Residual Serial Correlation LM Tests						
Null Hypothesis: No Serial Correlation at lag order h						
Lags	1	2	3	4	5	6
LM-Stat	4.65608	6.319518	10.53146	20.53795	6.996951	11.92545
Prob	0.8632	0.707562	0.309196	0.014868	0.637437	0.217545

Conclusion

Augmented Dickey fuller Test indicated that these data are non stationery at level form by stationery at first level difference. As suggested by the results of the Johansen test of co-integration also confirms that there are no co-integrating relationships between the three indices Nifty 50, Nifty Mid Cap and Nifty Small Cap. The trace statistic and Max-eigenvalue statistic suggests absence of a co-integrating vector. This shows that in the long run, the four indices not move in equilibrium which again exposes the efficiency of Indian stock markets. However, there are short run causality between return of large cap Index (Nifty) with their one period lag period variables and return of nifty midcap index.

Limitation of the Study

The data used in the study is restricted to last six years which can be extended to 10 years.

a) We are using closing value of indices, however, we can use average value of opening closing, high and low value of indices of a particular day.
b) We had examined the stationarity in intercept form, though we can check the stationarity in form with constant and trend.
c) We have used here the Johansan Co-integration Test to study the long run relationship. However, we can use Engle-Garner Cointegration Test.
d) Here we ignore the two component of VAR Modelling (i) Impulse Response function (ii) Variance Decomposition

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ORAL PRESENTATION-12

Global Competitiveness Index & its Relation with Sub-Indices: A Panel Data Approach on South Asian Region

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Abstract: The present study seeks to examine whether the basic requirements, efficiency enhancers and innovation and sophistication sub-indices influence the global competitiveness index of the south Asian countries. To examine the above issue five south Asian countries are considered. The yearly scores of those indicators are collected from the reports of world economic forum from 2010-2011 to 2016-2017. The methodology adopted: Panel data approach is used to examine the issue. The key finding is that FEM model is appropriate to explain the GCI of the south Asian countries.

Keywords: Basic Requirements, Competitiveness, GCI, Indicators, WEF

Introduction

Competitiveness is one of the most central pre - occupations for both advanced and developing countries (Porter 1990) and “policy makers express serious concerns about it” (Lall 2001). It is the set of institutions, policies, and factors that determine the level of productivity of an economy, which in turn sets the level of prosperity that the country can achieve. The original idea of Klaus Schwab (1979) about Global Competitiveness Index (GCI) is developed by Xavier Sala-i-Martin and published it in first in 2005 in collaboration with World Economic Forum (WEF). The GCI unites 114 indicators that capture concepts that matter for productivity and long-term prosperity. These components are grouped into 12 pillars of competitiveness such as (1) institutions, (2) infrastructure, (3) macroeconomic environment, (4) health and primary education, (5) higher education and training, (6) goods market efficiency, (7) labour market efficiency, (8) financial market development, (9) technological readiness, (10) market size, (11) business sophistication, and (12) innovation and each of them measures a different aspect of it. Again, these 12 pillars are categorized into three sub-indices such as basic requirements (1-4), efficiency enhancers (5-10), and innovation and sophistication (11-12). The three sub-indices are given different weights for the computation of GCI and divides countries based on their stages of development. GCI assumes that, in the first stage the economy is factor-driven where first four pillars under basic requirements sub-index of a country are developed. The efficiency enhancer’s sub-index includes those pillars which are important for countries in the efficiency-driven stage and the innovation & sophistication sub-index includes those pillars which are critical to countries in the innovation-driven stage. The present study focuses the impact of three sub-indices on GCI of the South Asian Region countries. South Asian is characterized by great diversity and includes one of the World’s ten largest economics like India.

Due to the increasing importance of global competitiveness in the understanding of contemporary economic and development issues, the researchers examine the relationship of the concept with various factors that influence it. It has become common to describe economic strength of an entity with respect to its competitors in the global market economy in which goods, services, people, skills, and ideas move freely across geographical borders (Saboniene 2009; Malakauskaite & Navickas 2010). According to D’Cruz in 1992 defines competitiveness is the ability of firm to design, produce and or market products superior to those offered by competitors, considering the price and non-price qualities. Some researchers (Barney & Hesterly 2001; Snieska & Draksaite 2007) observe that in changing business scenario some factors like business environment, dynamic capabilities, flexibilities, agility, speed, and adaptability are becoming more important sources of competitiveness. National competitiveness is one of the most important pre - occupations for both advance and developing nations (Porter 1990) and policy makers express serious concerns about it

(Lall 2001). Berger in 2008 identified four main but very different theoretical constructs for national competitiveness and they have large divergences. According to Berger, another fifth concept of national competitiveness exists based on Porter's diamond model and its extended version, although the diamond model has been widely applied to examine the competitiveness of different nations. According to Smith (2010), the weak aspects of Porter's model have been pointed out both by scholars of management and economics (Dunning 1992 & 1993; Rugman 1990 & 1991; Rugman & Verbeke 1993; Waverman 1995; Boltho 1996; Davies & Ellis 2000), although the methodology used by World Economic Forum is very closely related to Porter's diamond model. It defines country competitiveness is the "set of institutions, policies, and factors that determine the level of productivity of a country" (Schwab 2016).

GCI allows for several analysis levels when evaluating economic performance of the nations. Although, its application start with the firm level and it evaluates performance on the national, regional and global markets (Hvidt 2013, Fagerberg 1996, Roessner, Porter, Newman & Cauffiel 1996). In 2011, Silke explained global competitiveness to be the ability of countries to provide high levels of prosperity to their citizens. Measuring the global competitiveness entails quantifying the impact of various key factors that contribute to the creation of conditions for competitiveness. According to Helleiner in 2008, observes that global competitiveness also measures the policies and factors that contribute to sustainable economic prosperity. Hertog in 2011 says that it is significantly influenced by the way in which a nation uses the resources that it has. A more realistic definition is given by Alvarez et al. in 2009 that global competitiveness is the ability of the country to compete in global trade by exporting its products and thus competitiveness is considered in relations to the productivity and the growth of the nation. In 2011 Colton remarks that the concept of global competitiveness has come out as a new paradigm in economic performance studies. It is being used to capture the awareness of the threats and challenges that are caused by competition that occurs at the global level. It also helps to evaluate the performance of the institutions, factors and policies that significantly influence a nation's productivity levels.

Alfaki & Ahmed (2013) evaluate the relationship between global competitiveness and technological readiness in the Gulf region by focusing on the United Arabs Emirates (Aleksandra & Magdalena 2016). They observe that UAEs achieve immense success in technological readiness in terms of its Global Competitiveness Index (GCI). In a study by Wysokińska (2003), examined the concept of global competitiveness in terms of productivity levels and sustainable development in CEE and the countries of European Union. He observed that higher productivity leads to improved competitiveness in the global and local markets. Taner, Oncü, & Çivi (2010) also evaluates the performance of GCC nations based on international competitiveness. He concludes that the concept of global competitiveness is very multifaceted because of the wide array of indicators and factors that influence it.

In most of the existing literature, the concept of global competitiveness has been evaluated by looking at how it is influenced by specific economic parameters such as productivity levels (Wysokińska 2003), trade balances, national economic performance (Taner et al. 2010) and technological readiness (Alfaki & Ahmed 2013). Although, these parameters and variables have been effectively used to examine the factors that influence global competitiveness. The earlier studies basically deal with various definitions about GCI and search for different factors for formulating GCI. Some of the studies examine the impact of few factors like productivity, trade balances, economic growth and GDP etc on GCI. The present study examines the impact of three main sub-indices such as basic requirements, efficiency enhancers and innovation & sophistication on GCI on South Asian countries'/Economics. Currently, no study has been conducted to evaluate the impact of three sub-indices on GCI of South Asian countries.

Objective of the Study

The study is designed to achieve whether Global Competitive Index (GCI) depends on the variables such as Basic Requirements (BR), Economic Enhancers (EE) and Innovation & Sophistication.

The study uses yearly score of Global Competitive Index (GCI) and its one sub-index particularly Basic Requirements (BR). The study covers South Asian Economics. According to the GCI report (2016-2017) there are 6 countries or economics provided by World Economic Forum. Here 5 countries are considered because data relating to scores of Bhutan is not available for all the years. The study period covers from 2010-2011 to 2016-2017 and the annual score of 5 countries regarding GCI and its sub-indices is collected from the website of World Economic Forum (Secondary source).

Methodology

In order to examine the impact of Global Competitive Index (GCI) on sub-index particularly Basic Requirement (BR) or in other words how the GCI depends on BR. To examine this issue panel data regression model is applied. Here, GCI is the countries' competitive performance indicator that depends on the performances of the remaining independent indicators. There are six cross-sectional units (Countries/Economics) and seven time periods (2010-2011, 2011-2012, 2012-2013, 2013-2014, 2014-2015, 2015-2016 & 2016-2017). Therefore, the study consists of (N x T = 5 x 7) 35 observations. In other words, five countries are followed by seven years and sampled annually. If each cross-sectional unit has the same number of time series observations, then such a panel data is called balanced panel. In our case we have a balanced panel, as each country in the sample has seven (7) observations. A prior, GCI is expected to be positively related to BR, EE and IS. Polling, or combining, all 35 observations, the basic model of the determinants of GCI is the following:

$$GCI_{it} = \alpha_{1i} + \beta_1 BR_{it} + \beta_2 EE_{it} + \beta_3 IS_{it} + e_{it} \quad \textbf{(1)}$$

Here i and t refer to cross-sectional and time series aspects of data, respectively. As the number of cross-sectional units (N) is 5 and number of years (T) is 7, we have 35 observations on each variable (NT = 35). As, e_{it} is the disturbance term that is assumed to be independently and identically distributed [$e_{it} \sim$ i.i.d. $(0, \sigma^2)$].

Estimation of Panel Data Regression Model

To estimate regression equation 1, there are three important approaches, which are Constant Coefficients Model (CCM), Fixed Effects Model (FEM) and Random Effects Model (REM). These models differ with regard to the assumptions that are made about the intercept, the slope coefficients and the disturbance term of model 1. In this study, CCM model is not considered because it is assumed that all coefficients remain unchanged across cross-sectional units, and over time which is not realistic. In other words, the CCM ignores the space and time dimensions of panel data set. In reality, the homogeneity assumption may not be true, and different cross-sectional units may have different values for intercept and / or slope coefficients and thus this model are not considered here. However, this problem can be avoided by Fixed Effects Model (FEM) or the Random Effects Model (REM). These two models seek to make a more rational specification of the model such that the heterogeneity among the cross-sectional units is explicitly recognized, although the methods of doing so are different. In any case, these models are viewed as proper panel data models.

Fixed Effects Model

The fixed effect or LSDV model allows for heterogeneity or individuality among 5 countries by allowing its own intercept value. The term fixed effect is due to the fact that although the intercept may differ across countries, but intercept doesn't vary over time, that is it is time invariant.

According to the equation 1, GCI_{it} = Global Competitive Index of i^{th} country in the time period "t". BR_{it} = is the vector of the control variables such as institutions, Infrastructure, macro-economic environment and health & primary education. EE_{it} = is the vector of control variable such as higher education & training, goods market efficiency, labour market efficiency, financial market development, technological readiness and market size. IS_{it} = is another vector of control variable that includes business sophistication and R&D innovation. e_{it} = random error term.

Random Effects Model

The Random Effects Model (REM) doesn't use dummy variables to capture the presence of individual effect (here, country). If the dummy variables do in fact represent a lack of knowledge about the (true) model, why not express this ignorance through the disturbance term e_{it}? This is precisely the approach suggested by the proponents of the so-called error components model (ECM) or random effects model (REM).

The basic idea is to start with model 1:

$$GCI_{it} = \alpha_{1i} + \beta_1 BR_{it} + \beta_2 EE_{it} + \beta_3 IS_{it} + e_{it} \quad \textbf{(2)}$$

Instead of treating α_{1i} as fixed, here it is assumed that the individual effect is a random variable with a mean value of α_1. Then the intercept of i[th] cross-sectional unit can be expressed as under:

$$\alpha_{1i} = \alpha_1 + \mu_i \qquad i=1,2,..........5 \quad \textbf{(3)}$$

Where μ_i is a random error term with a mean value of zero and variance of σ_μ^2. The study considers sixteen countries and they have a common mean value for the intercept ($=\alpha_1$) and the individual differences in the intercept values of each country are reflected in the error term μ_i.

Now substituting equation 3 into equation 2, we obtain:

$$GCI_{it} = \alpha_1 + \beta_1 BR_{it} + \beta_2 EE_{it} + \beta_3 IS_{it} + \mu_i + e_{it} \quad \textbf{(4)}$$
$$= \alpha_1 + \beta_1 BR_{it} + \beta_2 EE_{it} + \beta_3 IS_{it} + \omega_{it} \quad \textbf{(5)}$$

Where, $\omega_{it} = \mu_i + e_{it}$ is the composite error term that has two components, μ_i, which is the cross-section, or country-specific, error component, and e_{it}, which is the combined time series and cross-section error component, sometimes called the idiosyncratic random term because it varies over cross-sectional units as well as over time. As this model considers individual effect (α_{1i}) as a random variable, hence the name Random Effects Model.

The usual assumptions that are made with regard to μ_i and e_{it} are as under:

$$\mu_i \sim N(0, \sigma_\mu^2)$$
$$e_{it} \sim N(0, \sigma_e^2) \quad \textbf{(6)}$$
$$E(\mu_i e_{it}) = 0;\ E(\mu_i \mu_j) = 0;\ (i \neq j)$$
$$E(e_{it} e_{is}) = E(e_{it} e_{jt}) = E(e_{it} e_{js}) = 0;\ (i \neq j;\ t \neq s)$$
$$\text{Here, } \sigma_\mu^2 = \text{var}(\mu_i) \text{ and } \sigma_e^2 = Var(e_{it}).$$

These assumptions imply that individual error components are not correlated with each other and are not correlated across cross-section and time series units. Using these properties of μ_i and e_{it}, we can work out the properties of ω_{it}.

$$E(\omega_{it}) = 0 \quad \textbf{(7)}$$
$$Var(\omega_{it}) = \sigma_\mu^2 + \sigma_e^2 \quad \textbf{(8)}$$

Now if $\sigma_\mu^2 = 0$, there is no difference between model 1 and model 4, in which case we can simply pool all the (cross-sectional and time series) observations and just run the pooled regression like Model 1.It is observed that ω_{it} has zero mean and constant variance (homoskedasticity). However, it can be shown that ω_{it} and ω_{is} ($t \neq s$) are correlated; that is, the error terms of a given cross-sectional unit at two different points in time are correlated. The value of such a correlation coefficient (ρ), corr (ω_{it} , ω_{is}), is as under:

$$\rho = \frac{\sigma_\mu^2}{\sigma_\mu^2 + \sigma_e^2} \quad \text{for } t \neq s \quad \textbf{(9)}$$

If we ignore this correlation structure and estimate the Random Effects Model (Model 4) by OLS method, the resulting estimators will be inefficient. The most appropriate method to estimate the REM is the Generalised Least Squares (GLS) method.

C. Choosing Between FEM and REM: The Haussmann Test

However, selection between FEM and REM is performed more rigorously by applying the Hausman Test. As pointed out earlier, REM is not preferred if the composite error term (w_{it}) gets correlated with the explanatory variable (s) of the model, which at times becomes a possibility. Hausman adapted a test based on the idea that if there is no correlation between w_{it} and explanatory variable(s), both OLS and GLS are consistent but OLS is inefficient. On the other hand, if such correlation exists, OLS is consistent but GLS is not. Hausman assumed that there are two estimators $\hat{\beta}^{FEM}$ and $\hat{\beta}^{REM}$ of the parameter vector β and added two-hypothesis testing procedures. The hypotheses are as under:

H_0: Both $\hat{\beta}^{FEM}$ and $\hat{\beta}^{REM}$ are consistent, but $\hat{\beta}^{FEM}$ is inefficient
H_a: $\hat{\beta}^{FEM}$ is consistent and efficient, but $\hat{\beta}^{REM}$ is inconsistent

Here, we actually test H_0 (random effects are consistent and efficient) against H_a (random effects are inconsistent, as the fixed effects will always be consistent). Hausman takes

$\hat{q} = (\hat{\beta}^{FEM} - \hat{\beta}^{REM})$ as the basis for the relevant test statistic. The Hausman test statistic is given by

$$H = \hat{q}'\left[Var(\hat{\beta}^{FEM}) - Var(\hat{\beta}^{REM})\right]^{-1}\hat{q} \sim \chi^2(k) \quad \textbf{(10)}$$

Where, k is the number of explanatory variable. The decision rule is: If computed value of Chi-square is greater than the theoretical Chi-square value at a chosen level of significance γ and degrees of freedom k, i.e., $\chi^2 > \chi^2_\lambda(k)$ we reject H_0 which says that the REM is consistent, and accept the FEM. In contrast, we don't reject H_0 if $\chi^2 \leq \chi^2_\lambda(k)$ and prefer the REM.

Now further check which model is appropriate? Fixed effect model or Pooled OLS regression model? One way to take into account the individuality of each country or each cross-sectional unit is to let the intercept vary for each country but still assume that the slope coefficients are constant across countries. The difference in the intercept may be due to countries' performances. It is also noted that the slope coefficients of the regression equation 1 don't vary across countries. This situation can be solved in a number of ways and dummy variable is one of the ways. Now the equation 1 can be written as:

$$GCI_{it} = \alpha_1 D_{1t} + \alpha_2 D_{2t} + \alpha_3 D_{3t} + \alpha_4 D_{4t} + \alpha_5 D_{5t} + \beta_1 BR_{it} + \beta_2 EE_{it} + \beta_3 IS_{it} + e_{it} \quad \textbf{(11)}$$

Here intercept is considered as a variable and uses dummy variables to account for differences among the countries with regard to the value of intercept. Thus, there are 5 cross-sectional units, we use 5 numbers of dummy variables to avoid dummy variable trap. Here, D_1=1 if the observation belongs to India, 0 otherwise; D_2=1 if the observation belongs to Sri Lanka, 0 otherwise; D_3=1 if the observation belongs to Nepal, 0 otherwise; D_4=1 if the observation belongs to Bangladesh, 0 otherwise and D_5=1 if the observation belongs to Pakistan, 0 otherwise. Here, the dummy variable is used to estimate the fixed effects, the model is also known as the least-squares dummy variable (LSDV) model or covariance model. Here, BR, EE and IS are known as covariates.

Now a question arises about appropriateness of model. Which model is suitable whether pooled OLS regression model or Fixed effect model?
H_0: Pooled OLS regression model meaning that all dummy variables will be 0
H_a: Fixed Effect Model

This can be judged by applying the Wald test whether all dummy variables are 0 or not.

Results & Discussion

The results of the FEM and REM are presented in table one. It is observed from FEM that the coefficients of basic requirements (BR) and efficiency enhancers are positive and statistically significant to explain the GCI of the South Asian countries. But Innovation & sophistication (IS) factor is positive statistically insignificant to explain GCI. Similarly, in case of REM, basic requirements and efficiency enhancers factors are positive and statistically significant to explain the GCI. But innovation and sophistication factor is negative and insignificant to explain GCI. The R^2 value of FEM (0.995406) is slightly high as compared to the REM (0.98954). The estimated D-W statistic is quite low based on FEM model, suggests existence of positive autocorrelation in the data.

Table 1 also presents Hausman test statistic. It is observed that the value of test statistic is 8.196921 and the probability value is 0.0421 which is less that 5% that means rejection of null hypothesis and can accept alternative hypothesis. Thus, fixed effect model (FEM) is appropriate model to explain the GCI function.

Table1: Estimation of FEM & REM

FEM				REM			Hausman Test	
Variable	Coefficient	t-statistic	R^2	Coefficient	t-statistic	R^2	χ^2	df
Constant	-0.231980	-0.983273 (0.3342)	0.995406	0.30293	0.417891 (0.6789)	0.989454	8.196921 (0.0421)	3
BR	0.577376	11.94970* (0.0000)		0.549414	30.07260* (0.0000)			
EE	0.383582	5.552325 (0.0000)		0.465030	12.93166* (0.0000)	D-W statistic 1.161349		
IS	0.100672	1.020537 (0.3165)		-0.031909	-1.101676 (0.2791)			
*significant at 5% level. Values in parenthesis are the probabilities values								

The study also further checks which model is appropriate to explain GCI function? Fixed effect model or pooled OLS regression model? Here, dummy variables are used to estimate FEM. The result of the FEM based on model 2 is given in table two. It is found that the coefficients of the BR and EE are statistically significant and the probabilities values are less than 5% meaning that those variables have significant impact on GCI. Innovation and sophistication factor is not a significant variable to explain GCI because the probability value is 31.65% which is more than 5%. Moreover, the estimated coefficients of the countries dummies are negative and statistically insignificant, as the probability values are very high that means the variables such as basic requirements, efficiency enhancers and innovation & sophistication are the insignificant variables that explain the GCI function properly for south Asian countries.

Table 2 represents Wald test statistics to test the null hypothesis which is as under:

H_0: Pooled OLS Regression model, meaning that all dummy variables are zero or not
H_a: Fixed Effect Model

The estimated F-statistic (2.314409) and chi-square statistic (9.57204) are insignificant and the probabilities values are high meaning that higher than five percent. Thus, H_0 is accepted and can reject H_a. Therefore, FEM with dummy variable is not an appropriate model to explain the GCI function.

Table 2: Estimation of FEM using dummy variables

Variable	Coefficient	t-stat	Prob.	R^2	D-W	Wald F-stat	Test χ^2
BR	0.577376	11.94970*	0.0000	0.995406	1.321369	2.314409 (0.0000) df = (5.27)	9.57204 (0.0511) df = 5
EE	0.383582	5.552325*	0.0000				
IS	0.100672	1.020537	0.3165				
India	-0.250995	-0.918224	0.3666				
Sri Lanka	-0.319430	-1.228337	0.2299				
Nepal	-0.182414	-0.905993	0.3730				
Bangladesh	-0.188051	-0.866763	0.3937				
Pakistan	-0.219010	-0.927756	0.3618				
*Significant at 5% level							

Now come to the result of fixed effect model again. Here, fixed effect model without dummy variable is the appropriate model. It is previously found that the explanatory variables such as Basic Requirements and Efficiency Enhancers are the significant variables which are positively influence the Global Competitive Index (GCI) of the south Asian countries/economics. Here the innovation and sophistication factor is positive but not significant whereas it is found negative and insignificant on REM. The cross-section fixed effects are non-zero that confirms about presence of fixed effect and the statistical tests also confirm about the superiority of Fixed Effect Model (FEM) as compared to the REM.

Table 3: Estimation of FEM & Cross Section Fixed Effect

Variable	Coefficient	Probability	Country	Effect
Constant	-0.231980	0.3342	India	-0.019015
Basic Requirements	0.577376	0.0000	Sri Lanka	-0.087450
Efficiency Enhancers	0.383582	0.0000	Nepal	0.049566
Innovation & Sophistication	0.100672	0.3165	Bangladesh	0.043929
--	--	--	Pakistan	0.012970

Conclusion

The present study examines whether variables such as basic requirements, efficiency enhancers and innovation & sophistication affect the global competitive index. Therefore, panel data regression model is applied because panel data, by combining the inter-country differences and intra-country dynamics have advantages over the cross-sectional or time-series data. It has greater capacity to capture the diverse complexity of Global Competitive Index (GCI) than a single cross-section or time series data. After various estimation of regression models and statistical testing the study reach to the conclusion about superiority of Fixed Effect Model (FEM) as compared to the CCM and REM in respect of south Asian countries. FEM perfectly estimates the coefficients of the parameters such as BR and EE which are statistically significant and positively affect the GCI.

Finally, it may be recommended that panel data regression model whether it may be FEM or REM accurately estimates the model parameters. It contains more degrees of freedom and more sample variability than cross-sectional or time series data.

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ORAL PRESENTATION-13

Monetary and Financial Policies: A Review through the Prism of Transparency

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Abstract: Invigorating research has been done so far in the literature of policy science but this paper is an attempt to arrange Financial and monetary policies in the light of transparency, in a comprehensive fashion. Rather this is a theoretical review which includes several schools of thoughts in an arranged form. So, this paper provides an overview, impact and critical evaluation of monetary and fiscal policies through the prism of transparency.

Keywords: Financial Practices, Monetary and Financial Policies, Transparency.

Introduction

The growing integration of financial markets and recent experience of crises associated with capital flow volatility have led to much reflection and analysis at domestic and international for a on ways to strengthen financial systems. Within this board context, enhanced transparency and public disclosure practices have gained prominence. Calls for greater transparency extend across a wide spectrum - central banks, commercial banks, securities and insurance firms, and other players in financial arrangements; state units; and also global institutions, including the IMF. The notion of transparency itself has gathered greater momentum. There are increasing calls, particularly on the formal sector, by legislatures, the media, markets, and the general public to become more open about their policies and operating practices. Transparency has been elevated as the 'Golden Rule' of the new international financial order.

Methodology

This paper examines the role of transparency as an operational feature in the pursuance of monetary and financial policies by the public sector and discusses its significance in the context of reform of specific areas of the monetary financial arrangements. It also depicts alternative forms and channels of disclosure and transparency and argues that transparency helps facilitate appropriate sequencing and orderly liberalization of the reform process. Clarity of the institutional design and reform strategy, explanation of the coordination between monetary and financial policy reform, and assuring the public, stakeholders, and transaction counterparties about the safeguards in place, help strengthen credibility and reduce market uncertainty relating to policy reform.

Results & Discussion

Structure and Relevance of Transparency

Policy transparency refers to an environment in which the objectives of policy - its legal, institutional, and economic framework; policy decisions and their rationale; data and information related to monetary and financial policies; and the accountability of the policymaking body - are provided to all interested individual, institutions in an understandable, accessible and timely basis.

The IMF's 'Code of Good Practices on Transparency in Monetary and Financial Policies' (MFP Transparency Code) has been developed as a component of a range of standards and codes for public sector disclosure and transparency, designed to strengthen the international monetary and financial system. It presents transparency practices of Central Banks and financial agencies in four categories:
a) Clarity of roles, responsibilities, and objectives of central banks and financial agencies;

b) Process of formulating and reporting of monetary policy decisions by the central bank and of financial policies by financial agencies;
c) Public availability of information on monetary and financial policies;
d) Accountability and assurances of integrity by the central bank and financial agencies.

These transparency practices serve as an ingredient to the micro-prudential policy framework that helps improve the quality and materiality of public disclosure of prudential regulation and supervision, and also as an element of the macro-prudential policy framework that helps to shape expectations. By improving the recognition of risks associate, clarifying the transmission mechanism from policies to objectives, and reducing uncertainty about the intentions of the policy-making agency, good transparency practices contribute to financial stability.

Reasons for Transparency

It is widely believed that inadequate transparency and disclosure by international organizations, national governmental units and private sector entities were contributory factors in the financial disturbance afflicted the global economy during the 1990s. In the absence of adequate, reliable and timely information and disclosure from all quarters, including policymakers and market participants, market will not be able to function efficiently and will continue to be highly vulnerable to instability. Without adequate information about the state of the economy and the financial markets, policy-makers cannot formulate good policies or react appropriately to unforeseen developments.

Content and Limitations on Transparency

It is the content and clarity of the information disclosed that transform ‘disclosure’ into ‘transparency’. Thus, for transparency to be meaningful the following five factors are significant
a) Timeliness in terms of regularity and predictability of communications dealing with policy decisions and disclosure of information.
b) Rationale of policy moves (extent of information disclosed helps market to make its own projections of interest rates and financial asset prices).
c) Announcement of changes in the operating procedures.
d) Clarity of communication of objectives and strategy of monetary and financial policy.
e) Explanation of risks facing the financial system including periodic assessments of progress and prospects with regard to the main policy objectives.

Transparency based on these factors enhances the meaning and usefulness of the information that is disclosed. It is the content and clarity of the information disclosed that transform ‘disclosure’ into ‘transparency’.

The content of disclosure of monetary and financial policies is critical for the efficient functioning of markets. The relevance of transparency increases the growth of international trading and financing arrangements and market sophistication. Failure to present timely public statements and reports on monetary and financial policy issues, with appropriate content, could undermine credibility and thus be counterproductive.

Limitations of Transparency

The benefits of countries that adopt good transparency practices in monetary and financial policies have to be weighed against potential costs. It may be appropriate to limit the extent of transparency when it could endanger the effectiveness of the policies or be potentially harmful to market stability or the legitimate interests of supervised entities. In the case of monetary policy, the rationale for limiting some types of disclosure is that transparency could adversely affect the decision-making process and policy effectiveness. Exchange-rate policy considerations, notably, but not exclusively, in countries with fixed exchange-rate regimes, may also provide justification for limiting certain disclosure practices.

Transparency of financial policies may also pose concerns. Moral hazard, market discipline and financial market stability considerations may justify limiting both the content and timing of the disclosure of some corrective actions and emergency-leading decisions, as well as information pertaining to market and firm-specific conditions.

Transparency as an Instrument of Financial-Sector Reform

Financial sector reform refers to policy and operational measures designed to deregulate or modify certain functions of the financial system and transform its structure with a view to achieving a liberalized, market oriented financial system. The operational and institutional arrangements for policy transparency and data disclosure, including monetary and financial policy transparency, need to be adapted to support financial sector reform and liberalization. Adequate disclosure of the financial conditions of banks and non-banks, and adequate transparency of the objectives, operational procedures and integrity of operations in major areas of policy and reforms can shape market exceptions, reduce uncertainty and facilitate financial reform, inter alia by reinforcing public support for reforms.

The scope and content of transparency and disclosure practices would need to evolve as internal and external liberalization progress. The literature on the appropriate sequencing of various components of financial sector reforms highlights the following principles which are important to bring about an orderly process of liberalization that preserves financial system stability.

a) Financial liberalization is best undertaken against a background of sound and sustainable macroeconomic policies.
b) Specific financial-sector reforms that support and reinforce macro economic stabilization should be given priority in implementation.
c) The implementation of prudential regulation and supervision and financial restructuring policies should be phased in to complement other financial reforms aimed at enhancing competitive efficiency and market development, in order to help manage risks in liberalization and foster financial-sector stability.
d) The liberalization of capital flows-by instruments or by sectors-should be sequenced to take into account the concomitant risks.
e) The peace of reforms should take into account the conditions relating to the financial structure of non-financial corporations and other entities and their effects on the quality of the loan portfolios and capital base of financial institutions.
f) The pace, timing and sequencing of liberalization need to take account of political and regional considerations.
g) Transparency can be effective tool in addressing two key challenges arising from these principles of sequencing financial reform: (i) achieving consistent application over time of these sequencing principles so as to manage the complexity of the reform process, achieve orderly liberalization and ensure stability; (ii) ensuring credibility of monetary policy in the face of major structural changes brought about by the reform process itself. In the design and implementation of financial-sector reforms, transparency helps to bridge the ‘credibility lag’. Clarity of the objectives of reform and the sequencing strategy, as well as transparency of institutional design and specific components of financial-sector reform and improve the effectiveness of institutional coordination of monetary and exchange reforms with the financial-policy reforms-such coordination is at the heart of a successful reform process. Transparency can play an important role not only in the prevention of financial crisis but also in managing a crisis, should one occur. As a crisis prevention measure, transparency helps to reduce the ‘recognition lag’, while during the crisis management phase, it helps to shorten the ‘policy lag’.

Transparency of Policy Co-ordination Arrangements

Institutional reforms are a key component of liberalization. Transparent arrangements for policy coordination help to strengthen the credibility of institutional reform and related policy processes, thereby reinforcing stability. For example, the creation of an independent and accountable central bank could contribute to credibility of monetary policy, only if the targets set by the central bank-and the operational framework to achieve the targets-are also compatible with the targets and instruments of fiscal authority. That is, the credibility of delegating monetary policy to an independent central bank is a function of the credibility of the inflation target itself, because the latter may not be compatible with the fiscal policy stance. Similarly, in many episodes of financial reform, the sustainability and credibility of the monetary policy framework could be constrained by the risk profiles of banks, the related fiscal costs and the possible systemic consequences of bank restructuring and resolution strategy. Likewise, the effectiveness of granting autonomy to a financial agency is not independent of the arrangements to restructure weak banks, protect deposits, and manage emergency lending. In the presence of weak banks and high moral hazard risks, strengthening financial regulation and supervision alone, unassisted by a restructuring strategy, may be futile.

More generally, this interdependence of different areas of financial sector reforms requires (a) that the elements of reforms be closely co-ordinated in terms of peace and sequencing of implementation and (b) that the relevant details of institutional design be transparent and be publicly disclosed in order to communicate clearly the policy priorities and how policy conflicts among units of government would be resolved, thereby enhancing credibility of the reform process.

The importance of disclosing the design of monetary policy institutions is emphasized in recent literature. To illustrate, achieving clarity on the division of responsibilities between fiscal and monetary authorities and on the arrangements for coordinating monetary and public debt management is particularly crucial in managing financial-sector reforms. Such clarity in co-ordination arrangements is emphasized in the MFP Transparency Code and is considered a critical factor in preserving both monetary and financial stability in the course of financial reforms. When multiple agencies are responsible for managing and exercising oversight over different aspects of the financial system, the public and the markets to be reassured that the agencies cooperate and coordinate effectively, in the interests of efficient policies and actions.

Disclosure and Transparency Aspects of Foreign Exchange Reserve Management

Sound transparency practices in the area of foreign exchange reserve management have assumed specific importance in the context of globalization and financial reform.

a) Inadequate disclosure and transparency of foreign exchange reserves data, including contingent liabilities, proved destabilizing in recent financial crisis episodes, leading to international efforts to strengthen dissemination standards for foreign reserves and liabilities data from central banks.
b) Concerns with strengthening of safe guards on official reserves managed by central banks or other agents, particularly in the context of making available new funding, have led to increasing attention to system of risk management and foreign exchange operations in central banks, the integrity of audited financial statements by central banks, and the adequacy of internal control and audit procedures to manage and reports risk exposures in central banks. Thus transparency practices relating to foreign exchange reserve management and foreign operations, and covering policy, process, and institutional arrangements, as well as accountability assurances of integrity of these operations, have received attention in recent international debate.
c) Sound practices in reserve management are increasingly seen as complementary to sound debt management; and hence transparency about both debt and reserve management-in an asset-liability management framework-would provide greater transparency about reserves and liquidity at the national level.

Monetary Policy Transparency during Financial-Sector Reform

Providing sufficient information at all times during the reform period helps the public to understand the policy regime and verify whether the central bank's action match the stated policy objectives and monetary policy regime. A key issue in financial sector reform, however, relates to the impact of structural reforms on the stability of the money demand function, the money supply process and the monetary transmission mechanism. This poses the particularly difficult question how to ensure credibility of monetary policy in the face of such reform-induced shocks. There is a risk that the central bank will lose credibility by disclosing targets for specific monetary or inflation aggregates, or the underlying forecasts of future economic outlook, because such targets and projections could deviate from reality or be coincidentally 'right for the wrong reasons', and this could cause a trade-off between the benefits of transparency of policy targets and the possible loss of credibility from such transparency. In such an environment, the trade-off can be minimized by a comprehensive approach to transparency. This should encompass targets and objectives of monetary and financial policy, the financial sector reform process itself and the associated monetary and financial policies, expected outcomes based on projected uncertainty arising from reform, and how the central bank propose to respond.

Clarity of objectives and projections of the likely impact of financial reform on monetary and financial outcomes could minimize uncertainty in the private sector about central bank intentions. It would enhance the reform process by giving the central bank a credible strategy for action, rather than point estimates. The advantage of this form transparency-public disclosure of forecasts and of possible central bank reactions or future actions-is being increasingly recognized.

Transparency in Payment and Settlement Systems and Financial Reform

In many emerging markets, the reform of the payments and securities settlements plays in an important role in facilitating market development, building up market liquidity and enabling more efficient monetary policy operations. Such reforms are highly interdisciplinary, involving technology, law, monetary operations, banking supervision, accounting systems, and new operational interfaces between the central bank and commercial banks. In such a complex environment, transparency about goals, strategy and the institutional arrangements that incorporate the views of diverse shake holders, and an open process for the design and execution of strategy, and immense help.

The core principles of Systematically Important Payment Systems provide a comprehensive framework for effective institutional reform that will ensure stability. Given the complexity of modern payment and settlement mechanism, transparency about their design and the likely risks involved in participating in the system can be important in enabling markets to understand and manage risks. The core principles call for a payment system's governance arrangements to be accountable and transparent. Transparency is emphasized to facilitate the effectiveness and accountability of the governance arrangement and to ensure that details and rationale of the payment system's rules and standards of operations are clear and easily understood by members. This requires disclosure of information relating to the governance structure and design of the risk management and internal control systems as part of payment systems oversight.

Conclusion

The trend in monetary and financial policy-making and its implementation is towards encouraging transparency and disclosure. The mechanisms and methods of communicating and disclosing, however, differ and depend on a variety of institutional factors. While financial liberalization and growing integration of financial markets can provide opportunities for improved market access, achieving this benefit requires appropriate sequencing of financial-sector reforms to support an orderly process of capital account liberalization and financial-sector opening. An effective pursuit of such reforms calls for enhanced disclosure and greater transparency that extend across all agents. At the same time, adopting good practices in monetary and financial policy transparency, and applying them to the process of financial-sector reform can contribute to ensuring a properly sequenced and orderly liberalization process.

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ORAL PRESENTATION-14

Digitalization of Banking Sector –A Cross Sectional Study on Banking Operations, Its Style of Leadership Functioning

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Abstract: Digitalization of the economy and business is the demand of the modern sustainable development. It is also mentioned in the Sustainable Development Goal (SDG) 2030 by UN. Without digitalization progressive development cannot be done. The digitalization of banking is one of the prime needed topics in digital era. Most of the service sectors are concentrates on digitalization of their operation as to reach maximum. As much several literature are surveyed on digitalization need of banking sectors as well as levels of digitalization in the banking sector in India. The Study aims to identify level of digitalization in banking sector in India in terms of Mobile Banking, Online Payment with special reference with e-commerce activities and Peer to Peer Lending Process as per RBI report and to identify level of Digital operational Style of functioning in Banking in selected area under study with a cross sectional few comparative study on IGI Report in this case. Data collected from secondary sources like RBI report and various other literatures available in this context from time to time. To establish behavioural pattern of operations of banking business we have collected some primary data in Howrah and Kolkata region and Purba & Paschim Medinipur region where digitalization is this sector has been established. The Howrah & Kolkata region is well equipped with digital banking for 15-20years but Purba & Paschim Medinipur is come under these activities with 5-10 years.30 branches in the Kolkata-Howrah and 3o Branches in Purba & Paschim Medinipur District are covered through direct and indirect questionnaire method. It is also surveyed upon the customers from Kolkata Howrah region and Purba & Paschim Medinipur region on 125 customers each from these two regions. As per RBI report the digitalizing in the inhouse banking operations in most of the banks especially nationalized commercial bank and private banks are incorporated. But the survey report showed that digitalization in banking is partial and should have to go much ahead. The management functions are yet to be digitized. The Digital India movement may be act as boost up dose for digitalization of customers in banking operations. It has no doubt that digitization of banking leads to restricted black economy.

Keywords: Banking Sector, Digitization, India, Operations

Introduction

Digitalization or digitization is an essential technological up gradation of the society and well as business and economy. In 1970 the term of digitalization came into the foray of discussion and its necessity has been felt in the contemporary literature. In the so called western part of the globe undertook this digitalization or digitization or digitizing aspects in the business, government activities and education, health and other allied field in seventies but in our country it is taken care with utmost care under so called Digital India movement.

Digitization in Banking Sector

Digitalizing Bank is the linking of banking operation to a digital world. It is a vital change in the operations of banks and other financial institutions to learn about, interact with and satisfy customers. An effective Digital Transformation starts with an understanding of digital customer's attitude, behavior, likings, choices, preferences, needs, aspirations etc.

Sumit Kumar in his study entitled Digital Transformation in Banking-The Future of Banking referring, the understanding of financial consumers in the Digital Era puts some light on the desires of today's digital consumer. He pointed out the study made by CGI that they are willing to leave where they currently bank if their needs are not met.

Kaushik Basu, World Bank Chief Economist, in a study entitled Digital India Still Elusive, commented that digitalization is an amazing transformation that today 40 percent of the world's population is connected by the internet. While these achievements are to be celebrated, this is also to be careful that we do not create a new underclass. With nearly 20 percent of the world's population unable to read and write, the spread of digital technologies alone is unlikely to spell the end of the global knowledge divide - The digital transformation of the economy and society

José Manuel and González-Páramo (2017) stated in his article entitled Digitalization and Banking Sector pointed that present era in which we live today is predominated by the word "Digitization". This word which has evolved in recent times has undoubtedly become the crux of "Banking Sector" in our country.

Shivnani and Ahuja (2016*)* pointed out in their article entitled A Critical Study of Digitalization in the Indian Banking Sector that India had more than 200 million internet users, compared to 665 million in China. Fewer than two out of every five Indian businesses had an online presence compared to almost two-thirds of firms in China. Total spectrum allocated to mobile communications in India is 288 MHz as opposed to 630 MHz in China. The cost of residential broadband service in India is 6-10 times more expensive than in China.

Significance of Digitalization

Shivnani and Ahuja (2016*)* pointed out in their article entitled 'A Critical Study of Digitalization in the Indian Banking Sector' following significance of digitalization:

- Going Paperless
- An increased access by the users:
- Enhancement in the quality of services being offered: Helps in providing enhanced services.
- Helpful in building up partnerships:
- An acute escalation in building infrastructural costs:
- Countering Inefficiencies.
- Enhancing Connectivity
- Ensuring Consumer satisfaction
- Widened area of reach

Leadership Style in Digital Operations

According to Barry Libert, Jerry Wind and Megan Beck Finley (2015), Leadership style should be as follows by mentioning Open matters, LLC diagram.

Table 1: Leadership Styles

Business Model	Asset Class	Leadership Style	Multiplier
Network Orchestrator	Network	Co-creator	8
Technology Creator	Intellectual	Collaborator	5
			Digital Divide
Service Provider	Human	Communicator	3
Asset Builder	Physical	Commander	2
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Objectives of the Study

- To identify level of digitalization in banking sector in India in terms of Mobile Banking, Online Payment with special reference with e-commerce activities and Peer to Peer Lending Process as per RBI report.
- To identify level of Digital operational Style of functioning in Banking in selected area under study with a cross sectional few comparative study on IGI Report in this case

Methodology

Data collected from secondary sources like RBI report and various other literatures available in this context from time to time. In order to establish behavioural pattern of operations of banking business we have collected some primary data in Howrah and Kolkata region and Purba & Paschim Medinipur region where digitalization is this sector has been established.

The Howrah & Kolkata region is well equipped with digital banking for 15-20years but Purba & Paschim Medinipur is come under the purview of these activities within 5-10 years. Again Howrah and Kolkata are industrially developed with state capital region against Purba & Paschim Medinipur which are based on agricultural and allied activities. 30 branches in the Kolkata-Howrah and 30 Branches in Purba & Paschim Medinipur District are covered through direct and indirect questionnaire method. It is also surveyed upon the customers from Kolkata Howrah region and Purba & Paschim Medinipur region on 125 customers each from these two regions.

Results & Discussions

1. To Identify Level of Digitalization in Banking Sector in India

E-Commerce Activity

According to RBI the e-commerce industry in India has seen unprecedented growth over the last few years, largely because of a higher level of internet penetration among the population. From a worth of \$3.9 billion in 2009, the worth of the Indian e-commerce market went up to \$12.6 billion in 2013. The number of online shoppers was 35 billion in 2014, and is now expected to cross 100 million by the end of this year. The newfound presence of the e-commerce industry in the country has led to a new form of payment: the online wallet. A more convenient method than using a credit card for every transaction, it is expected to achieve a compound annual growth rate of 68% this year.

Mobile Banking in India

Perhaps the biggest change in banking in recent times has been the introduction of mobile banking. The RBI issued its first set of regulatory guidelines to do with mobile banking in 2008, where banks were permitted to transfer funds from one bank account to another through the mobile platform. From 2010 to 2012, the number of users of mobile banking services grew 277.68% (from 5.96 million to 22.51 million) and the value grew a whopping 875.6% (from Rs. 6.14 billion to Rs. 59.90 billion). These figures clearly indicate that mobile banking in the country is growing at a very high rate.

Online Payments in India

The National Payments Corporation of India was set up in 2009 as an umbrella organisation for all retail payment systems (under section 25 of the Companies Act) with the core objective of consolidating and integrating the multiple systems with varying service levels into a nation-wide, uniform, and standard business process for all retail systems. In 2012, the RBI, in its Vision 2012-2015 document, recognized the development of new e-payment systems and the increasing proportion of transactions taking place through these systems

- Closed wallets can be issued by a company to a consumer for buying goods exclusively from that company, such as Flipkart or Amazon etc. They do not need any sort of permission or regulation from the RBI as they do not permit cash withdrawal or redemption, and hence are not classified as payment systems.
- Semi-closed wallets can be used to purchase goods and services at clearly identified merchant locations which have a specific contract with the issuer to accept the payment instrument. NBFCs can issue semi-closed wallets which need to be authorized by the RBI. The most commonly known online wallets (such as Paytm and Mobikwik) fall under this category.
- Open wallets can be used for the purchase of goods and services (including financial services) at any card accepting merchant terminal and can also be used for cash withdrawal at ATMs. However, these can only be issued by banks with approval from the RBI.
- The GAG recommended a Draft guidelines for the Bharat Bill Payment System (BBPS) were published on the RBI website in August 2014 for public comments. Based on recommendations, the RBI published guidelines for the implementation of the BBPS in November 2014.
- The BBPS will consist of two types of bodies, which will carry out distinct functions:
- Bharat Bill Payment Central Unit (BBPCU): The single authorized body which will set the necessary technical, operational, and technical standards for the entire system and its participants, and will also undertake clearing and settlement activities. The NPCI will serve as the BBPCU.
- Bharat Bill Payment Operating Units (BBPOU): The authorized operational units, which will work in adherence to the standards, set by the BBPCU.
- As of May 2016, 33 companies were reportedly approved by the RBI to function as BBPOUs. PayU India, PayTm, Oxigen, SBI, ICICI bank, HDFC bank, Kotak Mahindra Bank, Bank of Baroda, Axis Bank and RBL Bank and Tech Process have confirmed their BBPOU license, the system is expected to launch in July this year.

Peer-to-Peer (P2P) Lending

Another new development in the banking and finance sector is the introduction of peer to peer lending (hereinafter referred to as P2P lending). P2P lending is a form of crowd funding which is essentially an online platform designed to bring together lenders and borrowers. A fee is charged from both and this fee goes to providing services such as collecting loan repayments and doing a preliminary assessment on the trustworthiness of the borrower. The RBI issued a consultation paper on this in April 2016 and invited responses from the various stakeholders. The RBI identified that even though there is no credible data on the total lending through P2P platforms,

2. To Identify Level of Digital and Operational Style of Functioning in Selected Banking Branch Under Study

During our survey we have put some questions before customers following CGI study of digital transformation in bank. We put similar type of questions to the customers as well as employees of banking concern.

Study 1: Top Five Consumers Want in Banking

Table 2: IGI Study Report Mentioned by Sumit Kumar

Questions	Responses in Percentages
Reward me for my business	81%
Give me anytime, anyplace, access to my balance	61%
See me as a person	58%
Provide me with wealth-building advice	55%
Tell me what I am Spending money on and how I can save	52%
	Survey Report (Sample)
Reward me for my business	91%
Give me anytime, anyplace, access to my balance	45%
See me as a person	45%
Provide me with wealth-building advice	42%
Tell me what I am Spending money on and how I can save	33%

It is found that the digitalization in the area under study is far behind the IGI standard itself which is expected. The First question is that of if anyone persuaded in opening account in any particular bank what type of benefits are to be given there – it is observed that local people are more concerned than the international standard (US) which indicated one of the bargaining nature of the local people to achieve more gain. This is one of the very professional or commercial attitudes of the local people.

Second question is of related to the digitalization of bank where it found that the need of local people to access its accounts at any point of desire place is found to be lower than the international level (US) which indicated less concern about digital activities by the local people

The third question is a question of self esteems which also showed that local people are more reluctant in this area also. It is observed to be 45% against 58% in the international case (US).
The fourth question is value maximization service provided by the bank in terms of wealth creation which exhibited 42% against 55% (IGI) indicated lower concern towards value maximization by the local people although they were seeking more benefits from the bank which created a point of attraction that what types of benefits were asked by the local people from the bank

The fifth question is on the investment and savings matter which showed 33% in local people against 52% in the IGI study made the distinctive differences towards investment and savings attitude of the local people. They are surely opt for savings but confined within traditional savings in the nature of term deposits etc.

Study 2: Channels Innovations Bankers Believe Deliver the Most Value

This study entailed banking service entertained by the customers in the behest of their value needed activities connected with the banking services. It contains different options of banking such as Mobile Banking, Online Banking, and Branch Banking.

Table 3: IGI Report mentioned by Sumit Kumar

Mobile	Online	Branch
75% Mobile Payments	70 % Automated Account Origination	70% Analytical Led Cross-sell Suggestion
70% Services on Multiple Device Types	59% Personalization of Marketing Goers	67% Financial Planning Tools
46% Personalized Mobile Marketing Others	53% Personal Management Tools	53% 360 Degree View of Customers Entering the Branch
		Survey Report (Sample)
25% Mobile Payments	33% Automated Account Origination	42% Analytical Led Cross-sell Suggestion
42% Services on Multiple	17% Personalization of	12% Financial Planning

Device Types	Marketing Goers	Tools
14% Personalized Mobile Marketing Others	32% Personal Management Tools	33% 360 Degree View of Customers Entering the Branch

The study based on the survey method setting same questions as set by IGI for international perspectives. As the study confined Mobile Banking, Online Banking and Branch Banking which would surely helped us to ascertain level of consciousness in the general people about digital banking.

- Mobile Banking: In comparison between IGI study and ours study it is found that using mobile as payment device was of surf difference. Where it is 75% in the IGI study against in our locality its appeared as 25%. Another question was of using Mobile as device of multiple services it is found to be as 42% against IGI mark of 70%, which indicated far less consciousness or urge for adoption of using Mobile in different aspect in economic activity within local people. In the context of Marketing the use of Mobile is shown far below than the IGI study which are estimated as 14% against 46% respectively

- Online Banking: The first question is on the online bank account opening. It is found that IGI study showed 70% people opted for such operation against 33% in the study area. The second question is involved with online banking tools as personal marketing which would indicating e-commerce activities which is also estimated as 17% against IGI level 59%. Its implied that e-commerce through online banking is still to be go much ahead to reciprocate world dimensions. The third question pertaining to considering internet as their personal management tools which is also appeared big difference as 32% for local people in comparison to 53% in the IGI study. It has implied that online or internet using is still going far behind in our locality.

- Branch Banking: Another important and traditional banking system is branch banking. So far our study is concerned almost all the branches under different bank are fully automated by and large. The first question is on the basis of well equipedness of bank branch on analytical wings of cross sell suggestion which is immensely needed to the customer. It is appeared from the survey that it is accounted for 42% bank branches are well equipped in this area whereas 70% in the IGI study. This implied that local branches though digitalized still not prepared themselves for cross sell suggestion. The second question is on value addition service of bank branch which are found as 42% which is far below than the IGI study level of 67%. The third question is concerned with 360^0 view of customer entering branch which not only covers technical aspect of situational establishment of branch as well as local propaganda of having branch. This aspect is found comparatively narrow difference between two studies. It was 53% in IGI where as in the local study it is 33%.

Study 3: The Operational Aspects and Management Aspects on Digital Banking

This study is done to identify the operational and management aspect in digital banking. We know that leadership is a crucial point through which every action is being guided and channelized. If style of functioning of leadership is not suitable then everything will be jeopardized. So it very important aspect which should be taken into consideration where digitalization activities is going to make a shape with a big spectrum.

Table 3: Survey Report (Sample) on Digital Leadership

Questions	Responses in Percentages
Digital Instructions	11%
Digitally Resolution	09%
Digital Checking	02%
Formal Meeting	82%
Informal Meeting	16%

It has been setting five questions before the managers of each branch and employees about the digital leadership pattern in the bank branch under study which has showed that digital leadership is still in the vague.

Only 11% of bank branch manager are giving instruction digitally. Digital resolution of problems and decisions are taken in only 9% branch. Instructions and resolutions are taken mainly in formal procedure by making formal meeting. It is estimated that almost 82% branch adopted their activities in the formal meeting with formal resolution book. Only a few of 16% decisions are taken by informal meeting by occasional discussion between branch manager and staffs informally which would be taken granted in the any next formal meeting.

Interestingly the digital checking which is accounted for 2% only. That means only 2% of bank branch are adopting fully digital management other are partially adopting it. Those who are giving digital instruction are not all taking resolution digitally as it was 9% in comparison to digital instruction is accounted for 11% whereas digital checking is made only 2% case.

Table 4: Survey Report on Digital Leadership Style

Questions	Responses in Percentages
Commander Style Use	05%
Communicator Style Use	78%
Co-creator Style Use	11%
Collaborator Style Use	5%
Mixing Style Use	01%

We know that four leadership styles are in actions in digital world are commander style, communicator style, co-creator style, and collaborator style. It is recommended communicator style for service provider, Co-creator for networking provider, collaboration for technology provider and commander for asset builder in digital mechanism.

In the survey report it is found that most of the bank branch managers are using communicator style which accounted for 78%, where as 11% are using co-creator style, 5% each for collaborator and commander style. Only 01% is using mixing of all style. Thus it is found that most of the banking branches are using communicator style which is conform to the style of functioning with service provider as per theoretical prescription.

Conclusion

As per RBI report the digitalizing in the inhouse banking operations in most of the banks especially nationalized commercial bank and private banks are incorporated. But the survey report showed that digitalization in banking is partial and should have to go much ahead. The management functions are yet to be digitized. The Digital India movement may be act as boost up dose for digitalization of customers in banking operations. It has no doubt that digitization of banking leads to restricted black economy. But we should remember that 20 % or world population and 55% of Indian population are illiterate by and large. How they could be accessible to digital banking system. It is a matter of great concern.

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ORAL PRESENTATION-15

Inventory Management and its impact on Profitability: A Study of FMCG Companies in India

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Abstract: In the ordinary course of business Inventory management helps a firm to determine its inventory for operating activities smoothly. Excess or inadequate inventory is not desirable for the firms. Thus, for the smooth production and sales operation it is necessary to control and manage inventory. In this paper an attempt has been made to ascertain the inventory management and to find its impact on the profitability. For this purpose eight FMCG companies have been selected. The study has been conducted for a period of eleven years from 2004-05 to 2014-15. For analyzing data different ratios and various statistical tools have been applied.

Keywords: Efficiency, Inventory Management, Performance, Profitability

Introduction

Inventory or stock refers to the goods held for sale in the course of business. Goods may be in the form of finished goods, raw materials or work in progress. It is pertinent to say that an efficient manager has to ensure an optimum level of utilization of inventory. For that purpose he has to plan his raw material requirement well in advance. A firm has to plan its operation in such a way that it has sufficient amount of inventory to avoid the difficulties in future production. In financial parlance, inventory is defined as the sum of the value semi-processed materials or work-in-progress and finished goods. The nature of inventory is highly dependent upon the type of operation carried on. The term inventory is used to designate the combination of those items that are held for smooth production and active sales operation in the ordinary course of business. Therefore, inventory includes materials, work in progress and finished goods etc. the nature of inventory may be dependent on the type of business operation. Inventory is essential for flexible business operation [1].Raw materials are the basic material used in manufacturing a product. Work in progress is the inventory that includes the semi finished products held in the manufacturing process and finished goods inventories are the goods which are ready for sale. Inventory management aims to monitor and control the level of stocks available with an organization [2]. The management of a manufacturing company should know the items of inventory, types of inventory and cost related to each inventory that will be required for efficient management of inventory. A manufacturing company will maintain the raw materials, work in progress and the finished goods.

Inventory management refers to the efficient management and control of inventory. The efficient management will have direct impact on the profitability. The main objective of inventory management is to ensure the proper production as and when required and also the smooth sales operation. For proper management of inventories it is essential for the managers to study about the types and size inventory. Inventory management also includes the maintenance of optimum level of investment in inventory to minimize the cost related with it. The efficiency does not occur in investing more and more in the inventory, rather it is to invest at the optimum level for the greater efficiency. Thus, regular control and management of inventory is required for managers of the firm.

A company should maintain adequate stock of materials for uninterrupted supply to the production department. Every firm requires inventory management to give flexibility between production and sales. The various levels of inventory may be compared from time to time to meet the demand as and when required. It is impossible for a company to procure raw materials whenever it is needed. There is a time gap between the material demanded for production and its supply. There may be some external factors that may affect the procurement of raw materials and such it will affect necessary to procure such amount of inventory as raw material that may be needed for smooth production. Work-in-Progress and finished goods also need to be procured for uninterrupted sales. Stock of finished

goods has to be hold because there is a time span between the production and sales. A company cannot produce whenever the customers demand goods. Therefore, to supply goods to the customers at regular basis the stock of finished goods is to be procured. In a competitive market the companies have to supply the finished goods as and when it is demanded by the customers. Failure to supply the finished goods may result in loss of sales in comparison to other companies belonging to same industry. Efficient management should result in the wealth of the owners [3]. A firm should neither hold excessive inventories nor hold inadequate inventories. Both the situations are not desirable for a company. Therefore, a company should hold optimum level of inventory. The excessive inventories refers to the unnecessary tie up of firm's funds and loss of profit, excess carrying cost and there may be risk of liquidity. Once the fund is invested to procure excess inventories, then it cannot be utilized for some other more profitable opportunity. On the other hand maintaining a low level of inventory may also be dangerous. It may interrupt the production process and thus there may be chance of failure in the delivery of goods to the customers. The objective of the inventory management should be to avoid the excessive and inadequate levels of inventory and to maintain optimum level of inventory for smooth production and sales operation. In this paper an attempt has been made to know the impact of inventory management on profitability of selected FMCG companies.
The main objective of the study is to know the impact of inventory management on profitability of the selected FMCG companies in India. The study also analyzes the efficiency with regard to the inventory management of the selected companies.

Methodology

The data for the study was collected from the Annual Reports and Accounts of the selected companies. To accomplish the data various accounting ratios like ROCE, Inventory to CA Ratio, Inventory to WC Ratio have been used. To present the broad view of the objective various statistical techniques have also been used such as average, standard deviation, Coefficient of Variation, Regression etc. Analysis of Variance has been applied to test the hypotheses. Profitability has been taken as the dependent variable and Size of inventory, Inventory to Current Assets ratio and Inventory to Working Capital ratio has been taken as independent variables. In the present study, a sample of eight FMCG companies has been selected. Eleven years period commencing from 2004-05 to 2014-15 has been covered for the study purpose.

Tanvar and Shah (2012) found in their study that profitability analysis is of paramount significance in the context of overall performance of the business concern [4].
Chandra and Selvaraj (2012) observed that the selected companies have to reframe their capital structure, capacity utilization and liquidity position to enhance their profitability [5].
Jose et al. (2013) stated that the selected company is not following EOQ as there found variation in the EOQ and number of units purchased. It was observed from the study that the inventory management is not satisfactory [6].

Panigrahi (2013) stated that Inventory Conversion Period has adverse relationship with firm's profitability, which means when the inventory conversion period increases the profitability of the firm decreases and vice-versa. It was also asserted that firm's Gross Operating Profit ratio has a negative relationship with financial debt ratio [7].

Kasisomayajula (2014) conducted study on size, growth composition and growth of inventory of the selected Motor companies for a period of ten years for 2003-04 to 2012-13. It was found that in the Indian Commercial vehicle industry the management of inventory is very good. Among the selected companies Tata Motors ltd. is ahead in the management of inventory. It was also found that there is a strong correlation between inventory and sales in Tata Motors, whereas Force Motors need to improve its inventory level as per the operating requirements [8].

A case study conducted by Raphella, Nathan, Gomati and Chitra (2014) to find out inventory management technique and also to find out the economic order quantity of various products of the company. During the study period it was found that Cement and sand is the fast moving inventory throughout the year and Grave, Bricks and Steel are given less importance in the stock. It was also asserted that effort must be given to make a balance of optimum investment in inventory as it costs much money to tie down capital in excess inventory [9].

Mukopi and Iravo (2015) stated that inventory management of sugar manufacturing companies in western sugar belt affects the performance of the procurement function. It was suggested that sugar manufacturing companies should adopt lean inventory system and Information Technology for the better control of stock level [10].

Results & Discussions

Measuring Profitability and Liquidity

Table1: Return of Capital Employed (ROCE)

Year	ITC	EMAMI	DABUR	HUL	Britannia	NESTLE	GODREJ	MARICO
2004-05	47.20	21.65	121.31	45.90	167.42	112.73	142.86	31.00
2005-06	37.32	24.50	107.39	68.70	78.92	91.04	318.42	25.80
2006-07	33.57	21.96	90.32	67.00	39.71	116.29	76.25	35.80
2007-08	31.57	12.16	120.08	78.00	41.89	-238.39	69.16	40.30
2008-09	27.33	19.04	84.81	107.50	43.90	159.37	32.02	37.40
2009-10	44.00	24.51	83.27	103.80	35.56	110.98	76.54	34.50
2010-11	35.01	29.33	48.31	87.50	25.71	34.73	38.90	26.10
2011-12	36.86	34.54	40.26	96.80	55.33	27.31	44.67	24.30
2012-13	37.17	40.99	44.50	109.10	80.97	24.18	36.04	23.80
2013-14	37.02	37.52	44.71	130.20	67.89	29.40	66.47	30.40
2014-15	33.64	39.66	75.60	126.32	77.65	13.63	56.23	45.12
AVG	36.43	27.81	78.23	92.80	64.99	43.75	87.05	32.23
SD	5.47	9.34	30.46	26.14	39.02	105.64	82.65	7.03
CV %	15.03	33.58	38.93	28.17	60.04	241.45	94.95	21.80

Source: Annual Reports and Accounts

Table 1 depicts the ratio of Return on Capital Employed. The ratio is used to analyze profitability and it was found that during the period of study HUL has the highest average ROCE ratio of 92.8% followed by Godrej (87.05%). It means the measure of profitability is sound in Godrej, HUL and Dabur. The companies like ITC, Emami, Nestle and Marico are far behind the rest of the companies. The coefficient of variation of Nestle is 241% that shows a high fluctuating trend and it needs to be properly managed.

Table 2: Inventory Size

Year	ITC	EMAMI	DABUR	HUL	Britannia	NESTLE	GODREJ	MARICO
2004-05	2003	253	128	1470	134	253	74	112
2005-06	2636	276	116	1322	185	276	88	120
2006-07	3354	401	157	1548	302	401	117	196
2007-08	4051	435	201	1954	215	435	165	219
2008-09	4600	499	262	2529	254	499	127	274
2009-10	4549	576	298	2180	268	576	168	370
2010-11	5269	122	461	2811	311	734	306	454
2011-12	5638	109	529	2517	382	746	433	530
2012-13	6600	112	500	2527	331	736	536	709
2013-14	7360	137	558	2748	367	844	494	664
2014-15	7837	118	551	2602	346	821	166	791
AVG	4899.73	276.18	341.91	2200.73	281.36	574.64	243.09	403.55
SD	1873.25	174.34	179.93	542.28	78.58	214.96	169.85	242.95
CV %	38.23	63.13	52.62	24.64	27.93	37.41	69.87	60.20

Source: Annual Reports and Accounts

Among the sample companies, ITC has the maximum investment in the inventory (average 4899 cr) followed by HUL (2200 cr). Emami has an average investment in inventory of 276.18 Crore and Dabur India Ltd has 341.9 Crore. Godrej has less investment in inventory of Rs 243 crores. The coefficient of variation was found at 70.57 % in Godrej that means there is a fluctuating trend in the size of inventory.

Table 3: Inventory to Current Assets Ratio (ICA) of the Companies (2004-05 to 2014-15)

Year	ITC	EMAMI	DABUR	HUL	Britannia	NESTLE	GODREJ	MARICO
2004-05	0.57	0.55	0.51	0.44	0.52	0.55	0.72	0.42
2005-06	0.51	0.52	0.41	0.48	0.55	0.52	0.73	0.37
2006-07	0.53	0.63	0.40	0.49	0.79	0.63	0.60	0.53
2007-08	0.58	0.55	0.36	0.60	0.39	0.55	0.63	0.45
2008-09	0.56	0.58	0.35	0.45	0.47	0.58	0.21	0.49
2009-10	0.56	0.55	0.32	0.41	0.51	0.55	0.31	0.51
2010-11	0.40	0.10	0.33	0.40	0.44	0.57	0.54	0.63
2011-12	0.39	0.17	0.32	0.32	0.45	0.50	0.45	0.53
2012-13	0.38	0.16	0.27	0.33	0.46	0.32	0.45	0.53
2013-14	0.35	0.16	0.28	0.31	0.43	0.43	0.47	0.51
2014-15	0.33	0.11	0.35	0.28	0.24	0.33	0.32	0.55
AVG	0.47	0.37	0.36	0.41	0.48	0.50	0.49	0.50
SD	0.10	0.22	0.07	0.09	0.13	0.10	0.17	0.07
CV %	21.03	59.94	18.43	22.91	27.78	20.03	34.54	14.15

Source: Annual Reports and Accounts

The inventory to current assets ratio of ITC was 0.57 times in 2004-05 and it was decreased to 0.51 to the next year. Again there is an increasing trend for next two years and in the year 2008-09 it was 0.56 times and thereafter it has decreased to 0.35 times in the year 2013-14. Emami has a fluctuating trend in Inventory to current assets ratio during the study period. The average ICA of Emami was 0.37 times. Dabur has a decreasing trend of ICA ratio. It has 0.51 times in 2004-05 and decreased to 0.27 in the year 2012-13 and slightly increases in the next year to 0.28 times and 0.35 times after that. Dabur has an average ICA of 0.36 times during study period. HUL has an average ICA of 0.41

times and all other companies under study have nearly 0.50 times average ICA ratio during study period. The coefficient of variation of Emami is 59.9 % that show a fluctuating trend and it needs to be properly managed

Table 4: Inventory to Working Capital Ratio (IWC) of the Companies (2004-05 to 2013-14)

Year	ITC	EMAMI	DABUR	HUL	Britannia	NESTLE	GODREJ	MARICO
2004-05	3.97	-1.14	-1.83	-3.59	-2.98	-1.14	-1.95	0.70
2005-06	1.66	-1.18	-5.04	-0.98	5.61	-1.18	-2.10	0.73
2006-07	1.38	-1.25	3.93	-1.14	5.21	-1.25	-4.18	4.17
2007-08	1.57	-1.13	-6.70	-1.07	1.05	-0.40	-13.75	0.92
2008-09	1.33	-0.90	3.23	-13.82	2.02	-0.88	0.38	0.81
2009-10	57.58	-0.62	6.48	-1.60	7.44	-0.92	1.06	0.84
2010-11	1.15	-0.15	0.97	7.94	1.25	-4.12	-1.52	2.15
2011-12	1.06	0.44	0.96	1.87	-3.16	2.06	2.74	1.35
2012-13	0.91	0.30	0.72	-29.38	-1.14	0.77	3.55	0.85
2013-14	0.78	0.25	0.67	-1.22	-3.74	1.39	-1.23	1.72
2014-15	0.64	0.15	1.75	5.42	1.52	0.82	-0.16	1.09
AVG	6.55	-0.47	0.47	-3.42	1.19	-0.44	-1.56	1.39
SD	16.95	0.68	3.81	10.21	3.76	1.68	4.62	1.03
CV %	258.86	-143.36	814.62	-298.93	316.51	-380.46	-296.27	73.73

Source: Annual Reports and Accounts

From the above table it shows that ITC has an average inventory to working capital ratio of 6.55. The company has 3.9 times in the year 2004-05 and decreased to 1.33 in 2008-09. But suddenly it has increased to 57.58 times in the year 2009-10 and again falling down to 1.15 in the next year, and it was decreased to 0.64 during the year 2014-15. The coefficient of variation was 258.8 % in ITC that shows a higher fluctuation in the IWC ratio during the study period. Emami has a negative IWC trend up to the year 2010-11 and it become positive in year 2011-12 and stood at 0.44 times. Dabur has the highest coefficient of variation during the study period and shows too much fluctuation in the IWC ratio of Dabur India Ltd. HUL, Nestle, Godrej have negative IWC trend. Marico has 0.70 and 0.73 times IWC in 2004-05 and 2005-06 respectively and it has increased to 4.17 in 2007-08. It has an average IWC of 1.39 times. Marico has less fluctuation of IWC than the rest of the sample companies during the study period. This ratio was favorable in Dabur, Marico and Britannia industries in comparison to others.

Hypotheses

$H_0$1: There is no significant impact of Inventory Management on Profitability of the selected companies

H_A2: There is significant impact of Inventory Management on ROCE of the selected companies.

Table 5: Summary Output

Regression Statistics	
Multiple R	0.63
R Square	0.40
Adjusted R Square	-0.05
Standard Error	26.67
Observations	8.00

Table 6: Regression and ANOVA Test Analysis

	df	SS	MS	F	Significance F
Regression	3.00	1912.04	637.3	0.90	0.52
Residual	4.00	2845.56	711.3		
Total	7.00	4757.60			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	58.91	78.93	0.75	0.50	-160.25	278.06	-160.25	278.06
INV SIZE	0.01	0.01	0.71	0.52	-0.02	0.03	-0.02	0.03
ICA	-9.16	173.43	-0.05	0.96	-490.68	472.35	-490.68	472.35
IWC	-6.97	4.52	-1.54	0.20	-19.51	5.57	-19.51	5.57

Source: Annual Reports and Accounts

The multiple correlation coefficients between the dependent and independent variables is 0.63. This indicates that there is moderate degree of positive relation between them. The coefficient of determination i.e. R^2 is 40% which implies that only 40% of the variance in the dependent variable has been explained by the independent variable and the remaining 60% of the variation is due to other factors.

The table gives the regression coefficients and the constant of the dependent variables. Regression coefficient of Inventory Size at 0.01 indicates that when Inventory size increases by 1% then the ROCE will increase by 1%. It means the companies have not adequate return on capital employed. Regression coefficient of Inventory to Current Assets Ratio at -9.16 indicates that when the firm's investment in the inventory in relation to the current assets increases by 1% the ROCE will decrease by 916%. Regression coefficient of Inventory to Working capital ratio at -6.97 indicates that when proportion of inventory to working capital increases by 1% the ROCE will decrease by 697%.

Conclusion

From the above study it can be concluded that the Britannia Industries ltd. has efficient management in terms of Inventory Management. ITC, Godrej and Marico have slow rotation of inventory and it is being suggested to maintain proper liquidity. The study also states that Britannia and Marico has better Inventory to working capital ratio than other selected companies during the study period. It means that both the companies have higher liquidity. In addition it has been observed from the study that there is significant relationship between the profitability and Inventory management of the selected companies during the period of study. From the above table it is ascertained that calculated value of F is much larger than the tabulated value and hence the null hypothesis is rejected and it can be concluded that there is significant impact of inventory management on profitability of the selected FMCG companies during the period of the study.

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ORAL PRESENTATION-16

IFRS: A Paradigm Shift, Its Implementation and Prospect in India

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Abstract: Reliable, consistent and uniform financial reporting is important part of good corporate governance practices worldwide in order to enhance the credibility of the business in the eyes of investors to take informed investment decisions. Today with increasing globalization and integration of capital markets, it has become mandatory for companies to adopt a single language of financial reporting i.e., International Financial Reporting Standards (IFRS). More than 130 countries have converged or recognized the policy of convergence with the IFRS. IFRS are the globally accepted accounting standards and interpretations adopted by the IASB. An upcoming economy on world economic map, India too, has decided to converge the IFRS. In India, ICAI has decided to adopt the IFRS by April 2011. by April 2011. It is an emerging issue in the field of accounting in the Indian context. This paper discusses the IFRS adoption procedure in India and the advantages for India in adopting IFRS, the problems and challenges faced by the stakeholders and its impact on India. Lastly, the paper concludes with the ways through which these problems can be addressed.

Keywords: Convergence, Globalization; International Accounting Standards Board (IASB), IFRS.

Introduction

There are many accounting standards in the world, with each country using a version of their own generally accepted accounting principles also known as GAAP. These allow companies to report their financial statements in accordance to the GAAP that applies to them. The complication comes when the company does business in multiple counties. How can investors then deal with multiple standards, which ones are accurate, and how can companies be compared based upon their financials? The answer to these questions lies within the adoption of International Financial Reporting Standards or IFRS, which is being developed and supported by the International Accounting Standards Board (IASB), which operates under the oversight of the IFRS Foundation. The goal of the AISB and the IFRS Foundation is to develop a single set of global financial reporting standards that bring transparency, accountability and efficiency to financial markets around the world. Those standards serve the public interest by fostering trust, growth and long term financial stability in the global economy.

Therefore, International Financial Accounting Standards (IFRS) have gained momentum all around the globe. International convergence is becoming a recent and important topic for regulators, professional bodies, global investors, government and all other stake holders who use the financial information of public companies.

In recent years, there has a trend towards a common globalized accounting standard with IFRS used in many parts of the world, including the European Union, Hong Kong, Australia, Russia and Singapore among other nations. In January 2011, Canada officially adopted the IFRS standard with more countries switching from their own accounting requirements to the IFRS standard. As of December, 2012, the United Stated still operates under US GAPP, so it remains to be seen if they will switch as well.

Companies in India are also raising capital from foreign counties and are involved in diversification, investment and cross border mergers. Funds are moving across border borders of many countries. If companies report as per the rules prescribed by the local regulatory bodies, investors would have to study the accounting standards across various countries before investing.

Conversion is much more than a technical accounting issue. Ind-AS (the converged IFRS standards) in India may significantly affect a company's day-to-day operations and may even impact the reported profitability of the business itself. Convergence brings a one time opportunity to comprehensively reassess financial reporting.

The following are the main objectives of IFRS:

- To standardize accounting methods and procedures.
- To lay down principles for preparation and presentation of financial reporting systems.
- To establish a benchmark for evaluating the quality of financial statements prepared by the enterprises.
- To ensure the users of financial statements get creditable financial information.
- To attain international levels in the related areas.

Bhattacharjee (2009) seeks to explore prospects of IFRS adoption and their impact on the financial reporting environment of Bangladesh considering the underlying institutional and economic factors.

Datta (2009) tries to identify the similarities and differences among IFRS, US GAAP and India GAAP. This study recognizes that there are indeed many advantages arising from convergences to various stakeholders.

According to Sunitha and Rai, (2012) there are many challenges in first time adoption of IFRS. Those corporate need to gear themselves for constant update in all respect to make the standards uniform and to have a systematic approach in the financial statements.

Gopichand (2012) in his article identifies some of the qualitative as well as procedural differences between GAAP & IFRS

Sharma (2013) primarily analyze the information available on IFRS adoption process in India. It also focuses on the IFRS adoption procedure in India and the utility for India in adopting IFRS.

Kapoor and Ruhela (2013) discuss the IFRS implementation- issues and challenges for India. They conclude that proper education and training of employees about IFRS and formation of separate committee for IFRS leads to overcome the challenges faced by India

Das (2014) deals with the Problems and challenges faced in the process of convergence in Indian perspective and measures taken to address the challenges. They concluded if India wants a real leadership role, the way is to get in the IFRS system, be ready for the system and stay in the system.

Objectives of the Study

- To study the implications of importance of IFRS in the present situation and the process in adopting IFRS.
- To study the prospect of International Financial Reporting Standards will affect Indian corporate.
- To find out the Challenges and problems in adopting IFRS in India.

Research Methodology

The present work is blend of descriptive and exploratory research work where the reasons and challenges will be found out to follow the IFRS procedures. The work will also provide an insight on the future prospects by following the convergence process.
Sources of Data: The data is purely secondary and has collected through various websites and journals, as well as published books.

IFRS: “A single set of high quality, understandable and enforceable global accounting standards that require high quality, transparent and comfortable information in financial statements and other financial reporting to help participants in the world’s capital markets and other users make economic decisions”

IFRS refers to the entire body of IASB pronouncements, including standards and interpretations approved by the International Accounting Board (IASB) & IASs and SIC interpretations approved by the predecessor International Accounting Standards Committee(IASC).Broadly, IFRS consist of-

a. 16 International Financial Reporting Standards (IFRS)
b. 25 International Accounting Standard (IAS)
c. 13 International Financial Reporting Interpretation Committee (IFRIC) Interpretations.
d. 5 standards Interpretation Committee (SIC) Interpretation.

IFRS are Global Accounting Standards adopted by most of the countries.

Advantages of IFRS

- Level of Confidence: The Key benefit will a common accounting system that is perceived as stable, transparent, and fair to investors across the world, whether local or foreign.
- Investment: Foreign investors will be attracted to economies.
- Risk Evaluation: IFRS will eliminate barriers to cross-border listings and will be beneficial for investors.
- Merger and Acquisition Activity: Cross border mergers and acquisitions will get a boost by making it easier for the parties involved in as far as redrawing the financial statements is concerned.

Adoption or Convergence-The two terms though used interchangeably but there is a faint but important difference.
Adoption: It is the process of adopting IFRS as issued by IASB, with or without modification.
Convergence: It is harmonization of national GAAP with IFRS through design and maintenance of accounting standards in a way that financial statements prepared with national accounting standards are in compliance with IFRS.

Options to Implement IFRS

Adoption of IFRS as it is | **Convergence**

India has not adopted IFRS but converged with IFRS.
In a nutshell, Ind-AS can be referred as “International Dish with Indian Flavour” or “Desi version of IFRS”

Need for Adoption of Converged IFRS I.E. Ind As

In the existing GAAP there was a wide gap when compared with Global Standards i.e IFRS. The gap as due to non-adoption or lack of following concepts in the standards:

- Financial Instruments
- Hedge Accounting
- Fair Value Measurements
- Service Concessions
- Embedded Leases And Derivatives
- Share Based Payments
- Business Combinations

IFRS Adoption Procedure in India

To rationalize accounting practices in the country, the Indian Government in 1949, established Institute of Chartered Accountants of India by passing ICAI Act, 1949.Accounting Standard Board was constituted by ICAI in 1977 in order to create harmony among the diversified accounting policies and practices in India. Three steps process was laid down by the accounting professionals in India which are summarized as follows:

1. **Step-1** (IFRS Impact Assessment): In this step the firm will assess the impact of IFRS adoption on Accounting and Reporting issues, on procedures and systems, and on core business of the entities. Then the firm will find the key conversion dates according to IFRS training plan has laid down. As and when the training plan is in place, the firm will apply to the firm and also the variations among the present financial reporting standards being followed by the firm and IFRS both.

2. **Step-2** (Preparations for IFRS Implementation)**:** This step will carry out such activities required for IFRS implementation process. Then the firm will reform the internal reporting systems and processes. IFRS first deals with the adoption and implementation of first time adoption process.

3. **Step-3 (**Implementation): This is the final step of the process which deals with the actual implementation of IFRS. The initial phase of this step is to prepare an opening Balance Sheet at the date of transition of IFRS. To understand the actual impact of the transition from the Indian accounting Standards to IFRS is to be developed. This will follow the full application of IFRS as and when it is required. At the initial stage of implementation of IFRS requires lot of training and various technical difficulties may be experienced. The smooth implementation of the transition from Indian Accounting Standards to IFRS, regular training to personnel and identify the problems while carrying out the implementation.

Beneficiaries of Convergence with IFRS

- The Investors
- The Professionals
- The Corporate World

Roadmap for implementation of Indian Accounting Standards (Ind AS), for Companies other than banks, NBFCs and Insurance Companies

Phase-I:
1st April 2015 or thereafter (with comparatives): Voluntary Basis for any company and its holding, subsidiary, JV or associate company
1st April 2016: Mandatory Basis
a) Companies listed/in process of listing on Stock Exchanges in India or Outside India having net worth > INR 500 crore
b) Unlisted Companies having net worth > INR 500 crore
c) Parent, Subsidiary, Associate and J. V of Above

Phase-II:
1st April 2017: Mandatory Basis
a) All companies which are listed/or in process of listing inside or outside India on Stock Exchanges not covered in Phase I (other than companies listed on SME Exchanges)
b) Unlisted companies having net worth INR 500 crore > INR 250 crore
c) Parent, Subsidiary, Associate and J. V of Above
d) Companies listed on SME exchange are not required to apply Ind-AS.

Once Ind AS is applicable, an entity shall be required to follow the Ind-AS for all the subsequent financial statements.

Companies not covered by the above roadmap shall continue to apply existing Accounting Standards notified in Companies (Accounting Standards) Rules, 2006.

Roadmap for Implementation of Indian Accounting Standards (Ind AS), for Scheduled Commercial Banks (Excluding RRBs), Insurers/Insurance Companies and Non-Banking Financial Companies (NBFC's)

Phase-I:
From 1st April, 2018 (with comparatives)

- NBFCs (whether listed or unlisted) having net worth 500 crore or more
- Holding, Subsidiary, JV and Associate companies of above NBFC other than those already covered under corporate roadmap shall also apply from said date

Phase-II:
From 1st April, 2019 (with comparatives)

a) NBFCs whose equity and/or debt securities are listed or are in the process of listing on any stock exchange in India or outside India and having net worth less than 500 crore.
b) NBFCs that are unlisted having net worth 250 crore or more but upto 500 crore
c) Holding, Subsidiary, JV and Associate companies of above other than those already covered under corporate roadmap shall also apply from said date
d) Applicable for both Consolidated and individual Financial Statements
e) NBFC having net worth below 250 crore shall not apply Ind AS.

Adoption of Ind-AS is allowed only when required as per the roadmap. Voluntary adoption of Ind AS is not allowed.

Scheduled Commercial banks (excluding RRB's) and Insurers/Insurance Companies

From 1st April, 2018 (with comparatives):

a) Holding, subsidiary, JV and Associates companies of scheduled commercial banks (excluding RRB's) shall also apply from the said date irrespective of it being covered under corporate roadmap.
b) Applicable for both consolidated and individual Financial Statements
c) Urban Cooperative banks (UCBs) and Regional Rural banks (RRBs) are not required to apply Ind AS.

Challenges in Adopting IFRS in India

a) Lack of awareness about international accounting practices
b) Difference between GAAP and IFRS
c) Issue of GAAP Reconciliation
d) Proper Training to the accounting professionals.
e) Long time required for adoption of IFRS.
f) Complexity in adoption of IFRS.
g) High cost for adoption of IFRS.
h) Fair value measurement.
i) Re-negotiation of contract.
j) Amendments to existing taxation laws.
k) Lack of responsiveness to International Financial Reporting Practices.
l) Difficult to make adjustment with Indian Taxation law.

Measures Taken to Address the Challenges

a) For changes required in rules and regulations of various regulatory bodies, draft recommendations have been placed before Accounting Standard Board.
b) The ICAI issued 30 interpretations of accounting standards, with a view to resolve various intricate interpretational issues arising in the implementation of new accounting standards.
c) Guidance notes have been issued by ICAI for providing immediate guidance on accounting issues.
d) ICAI has issued materials on newly issued accounting standards.

e) For the purpose of assisting its members, The ICAI council has formed an expert advisory committee to answer queries from its members.

Prospects for IFRS in India

- Implementation of IFRS would help in bringing excellence on financial reporting.
- IFRS standards would enable comparability of financial informations, which will boost investor confidence, thereby enabling companies to raise capital at lower costs.
- Historical costs will be replaced by fair values in several balance sheet items, which will enable the entities to know its true worth. By providing transparent and comparable financial information, reporting as per Standards will provide an impetus to cross-border acquisitions, will enable partnerships and alliances with foreign entities, and lower the cost of integration in post-acquisition periods.

Table 1: Comparison of IFRS as applicable on 1st April 2011with Ind AS placed at MCA's website

Serial No	IFRS / IAS No	Corresponding Indian Accounting Standard Name	Name
1	IAS 1	Ind AS 1	Presentation of Financial Statements
2	IAS 2	Ind AS 2	Inventories
3	IAS 7	Ind AS 7	Statement of Cash Flows
4	IAS 8	Ind AS 8	Accounting Policies, Changes in Accounting Estimates and Errors
5	IAS 10	Ind AS 10	Events after the Reporting Period
6	IAS 11	Ind AS 11	Construction Contracts
7	IAS 12	Ind AS 12	Income Taxes
8	IAS 16	Ind AS 16	Property, Plant and Equipment
9	IAS 17	Ind AS 17	Leases
10	IAS 18	Ind AS 18	Revenue
11	IAS 19	Ind AS 19	Employee Benefits
12	IAS 20	Ind AS 20	Accounting for Government Grants and Disclosure of Government Assistance
13	IAS 21	Ind AS 21	The Effects of Changes in Foreign Exchange Rates
14	IAS 23	Ind AS 23	Borrowing Costs
15	IAS 24	Ind AS 24	Related Party Disclosures
16	IAS 26	*	Accounting and Reporting by Retirement Benefit Plans
17	IAS 27	Ind AS 27	Consolidated and Separate Financial Statements
18	IAS 28	Ind AS 28	Investments in Associates
19	IAS 29	Ind AS 29	Financial Reporting in Hyperinflationary Economies
20	IAS 31	Ind AS 31	Interests in Joint Ventures
21	IAS 32	Ind AS 32	Financial instruments: Presentation.
22	IAS 33	Ind AS 33	Earnings per share
23	IAS 34	Ind AS 34	Interim Financial Reporting
24	IAS 36	Ind AS 36	Impairment of Assets
25	IAS 37	Ind AS 37	Provisions, Contingent Liabilities and Contingent Assets
26	IAS 38	Ind AS 38	Intangible Assets
27	IAS 39	Ind AS 39	Financial Instruments: Recognition and Measurement

28	IAS 40	Ind AS 41	Investment Property.
29	IAS 41	**	Agriculture
30	IFRS 1	Ind AS 101	First time Adoption of Indian Accounting Standards
31	IFRS 2	Ind AS 102	Share based Payment
32	IFRS 3	Ind AS 103	Business Combination
33	IFRS 4	Ind AS 104	Insurance contracts
34	IFRS 5	Ind AS 105	Non-current Assets held for sale and Discontinued Operations
35	IFRS 6	Ind AS 106	Exploration for and Evaluation of Mineral Resources
36	IFRS 7	Ind AS 107	Financial instruments: Disclosures
37	IFRS 8	Ind AS 108	Operating Segment
38	IFRS 9	***	Financial Instruments

1 The term 'IFRS' includes only the International Financial Reporting Standards(IFRSs) issued by the ASB, it also includes the International Accounting Standards (IASs), IFRICs and SICs..
* Ind-AS corresponding to IAS 26, Accounting and Reporting by Retirement Benefit Plans, has not been placed on MCA's website as this standard is not applicable to companies.
** Ind-AS corresponding to IAS 41, Agriculture, is being redrafted.
*** It has been decided that Ind AS corresponding to IFRS 9, Financial Instruments, should not be issued since it was felt that it was incomplete; instead of this standard, Ind AS 39 has been issued.

Results & Discussion

IFRS Convergence will have a fundamental impact on the numbers and how they are reported. The scale of change can cause anxiety, especially when the numbers impact the wider business. Companies need to start thinking about convergence in more detail now, because it's coming quicker than some think. At a minimum, they need to build awareness within the organization. A broad steering committee across all functions can help push out information. The objective of conversion is to ensure the global compatibility and having more carved outs mean that the objective is never met. All regulators i,e. External- Ministry of Corporate Affairs, Ministry of Finance(Tax),SEBI, ICAI, Reserve Bank of India, IRDA, IASB have to closely work together to maintain the consistency in roadmap to implement IFRS.

Suggestion

Government of India and ICAI should take proper steps to organize conference, workshops and other awareness programs in order to create awareness among the accounting professionals and concerns regarding the IFRS.

- Government should set rules regarding Fair Valuation Accounting.
- ICAI should introduce IFRS course for students.
- ICAI should give proper training to the accounting professional.

- Taxation laws should address the treatment of tax liabilities arising on convergence from India.

Conclusion

- Newly framed Indian AS are the converged form of IFRS and ICAI and MAC has accepted most of the provisions of IFRS as it is. If we compare between Indian AS and IFRS, except few items all the provisions are same as IFRS. So it is a good thing about Indian AS that we have not any major changes in Indian GAAP.

- IFRS could bring in volatility in earnings and that is primarily because of the fair valuation accounting which is being brought into by the IFRS. But over the period both analyst and investors will take that into account.
- Any accounting change won't impact the real economic profit, this will just change the way of presentation and disclosure practices of accounting information and due to these changes in accounting treatment, the profitability will get affect.
- IFRS will definitely facilitate various areas such as cross border takeover, share based payments etc.
- Indian AS framed by ICAI and MAC are revised form of IFRS which are made with regulatory requirements required by various regulatory bodies.
- Conversion from Indian GAAP to IFRS will face many difficulties but at the same time looking at the advantages that this adoption will confer, the convergence with IFRS is strongly recommended because the measures taken by ICAI and the other regulatory bodies to facilitate the smooth convergence to IFRS are creditable and give the positive idea that country is ready for convergence.
- All corporate need to gather information for themselves for constant update and not only for the first time adoption.

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ORAL PRESENTATION-17

Impact of Demonetization on Inflation in India: A Comparative Analysis of Consumer Price Index (CPI)

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Abstract: The present study tries to analyze the influence of demonetization on the inflation rate and the consumer price index in the context of India. Before 2016, it has taken place in the past during the years 1946 and 1978 in India. In all the situations, the main intension was to reduce the black money circulation from the economy. The demonetization policy had a significant impact on prices whether it is consumer goods or durable goods, but it had a major impact on the prices of retail fast moving consumer goods. In order examine whether the inflation rate has changed significant or not, a trend in Consumer Price Index of India for the period before and after demonetization has been taken onto consideration and compared. For this, the monthly CPI from the period of January 2013 to January 2017has been taken into consideration. A comparison between the CPI, inflation rate and prices of the different groups of commodities have been analyzed. The analysis reflects the fact that there has been a change in the price level and as a result of which the CPI before and after the cash crunch months have changed. A trend analysis on the CPI during the period 2013-17claims that there has been a significant change in CPI overtime.

Keywords: Consumer Price Index, Demonetization, Inflation Rate, Trend Analysis

Introduction

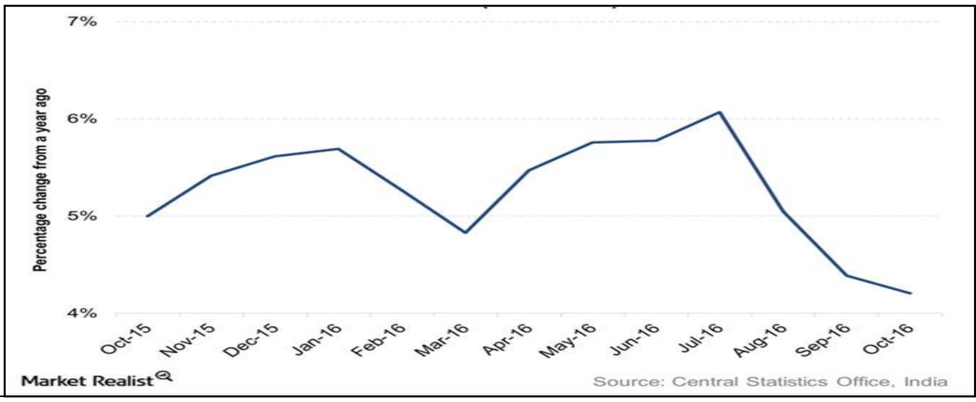
Demonetization for us means that Reserve Bank of India has withdrawn the old Rs 500 and Rs 1000 notes as an official mode of payment. Demonetization is the act of stripping a currency unit of its status as legal tender. On 28 October 2016, the total currency in circulation in India was Rs. 17.77 lakh crore (US$260 billion). In terms of value, the annual report of Reserve Bank of India of 31 March 2016 stated that total bank notes in circulation valued to Rs.16.42 lakh crore (US$240 billion) of which nearly 86% (i.e. Rs. 14.18 lakh crore (US$210 billion)) was 500 and 1000 rupee notes. In terms of volume, the report stated that 24% (i.e. 2,203 crore) of the total 9,026.6 crore bank notes were in circulation. This measure has been taken by the PM in an attempt to address the resolve against corruption, black money and counterfeit notes. This move is expected to cleanse the formal economic system and discard black money .The reasons of it are as under:

a) To tackle black money in the economy;
b) To lower the cash circulation in the country which is directly related to corruption in our country;
c) To eliminate fake currency and dodgy funds which have been used by terror groups to fund terrorism in India;
d) The move is estimated to scoop out more than Rs 5 lakh crore black money from the economy.

Short Term Impacts

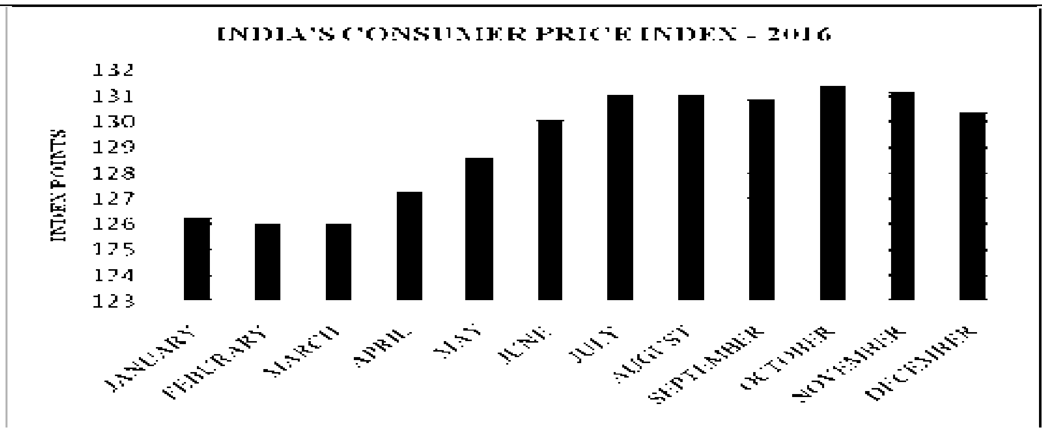
The demonetization, by removing 86 per cent of the currency in circulation, has resulted in a very severe contraction in money supply in the economy. This contraction, by wiping out cash balances in the economy, will eliminate a number of transactions for a while, since there is no or not enough of a medium of exchange available. Since income and consumption are intrinsically related to transactions in the economy, the above would mean a severe contraction in income and consumption in the economy. This effect would be more severe on individuals who earn incomes in cash and spend it in cash. To a lesser extent it would also affect individuals who earn incomes in non-cash forms but need to withdraw in cash for consumption purposes, since a number of sectors in the economy still work predominantly with cash.

In terms of the sectors in the economy, the sectors to be adversely affected are all those sectors where demand is usually backed by cash, especially those not within the organized retailing. For instance, transport services, *kirana*, fruits and vegetables and all other perishables, would face compression in demand which is backed by purchasing power. This in turn can have two effects: while it is expected that supply exceeds demand, there would be a fall in prices, however, if supply too gets curtailed for want of a medium of exchange, prices might, in fact, rise. Thus, while generally people seem to expect prices to fall, it is quite possible that prices would instead rise. The impact of an incremental reduction in money supply where the demand and the supply chain remain unaffected would be different from a case where there is a drastic reduction in money supply and outputs might adjust rather than the adjustment being in prices. In other words, the expectation that inflation would decline.



Sources: Central Statistics Office

Figure1: Change in Consumer Price Index (CPI) from October 2015 to October 2016



Source: www.tradingeconomics.com (Ministry of Statistics and Programme Implementation – MOSPI India)

Figure 2: India's Consumer Price Index for the Year 2016

Singh P. et al. (2016) stated that Demonetization for us means that Reserve Bank of India has withdrawn the old Rs. 500 and Rs 1000 notes as an official mode of payment. Demonetization is the act of stripping a currency unit of its status as legal tender. On 28 October 2016, the total currency in circulation in India was Rs. 17.77 lakh crore (US$260 billion). In terms of value, the annual report of Reserve Bank of India of 31 March 2016 stated that total bank notes in circulation valued to Rs.16.42 lakh crore (US$240 billion) of which nearly 86% (i.e. Rs. 14.18 lakh crore (US$210 billion) was 500 and 1000 rupee notes.

Rao K. (2016), stated that demonetization, by removing 86 per cent of the currency in circulation, has resulted in a very severe contraction in money supply in the economy. This effect would be more severe on individuals who earn incomes in cash and spend it in cash.
Deodhar R. (2016) highlighted the fact that Demonetization is the mechanism by which the government states to withdraw the money which is current legal tender. The government being sovereign can take such decision. The effect of this announcement is that the currency notes in circulation will now cease to be valid tender and can only be exchanged at the banks. Demonetization of higher denomination notes as an idea has been around.

Sinha A. et al. (2016) highlighted that Declaration of 86 percent of currency notes as illegal tender in just a blink of time on eve of 8th November 2016 mandated the creation of immediate interruption in daily lives. The chaos was created in every strata of the society whether upper, middle or lower.

Kalyani P. (2016) stated that there was acute shortage of money in market and daily transaction was severely affected. With the older 500 and 1000 Rupees notes being scrapped, until the new 500 and 2000 Rupees notes get widely circulated in the market, money supply is expected to reduce in the short run.

Lahiri A. (2016) stated that the cash shortage may have already affected the prices of perishable goods and services. Prices of vegetables in wholesale markets, according to newspaper reports, have fallen significantly. Overall inflation may come down because people have less cash to transact, but this decline in inflation will be for a short period.

Ramdurg A. et al. (2016) stated that, Demonetization is not new to India or to the outside world. Various Governments across the world have decided to ban currency note in circulation, rendering huge amount of cash useless overnights, due to plethora of reasons. Demonetization, entire amount in circulation was not reached back to Government. It means certain amount of money which was in circulation is lost. Therefore it leads to deflationary conditions.

Objectives of the Study

The main objective of the study is to have an in depth understanding and about whether demonetization has had an impact on inflation and price levels. The following are the other objectives:

- To understand the concept of Demonetization and its impact.
- To determine the prices before and after the episode of Demonetization.
- To determine the inflation before and after Demonetization.
- To understand and determine whether Demonetization has affected the inflation in India.
- To compare the inflation in different groups such as food and beverages, clothing and footwear, housing, consumer food price index and general index for all the groups.
- To analyze whether the consumer price index has changed over the years to show the change inflation rates in India before and after the Demonetization episode. For this regression test is done to show a significant change in CPI which in turn would reflect change inflation.

Methodology

To fulfill the objectives of the present study, the following research methodology has been used:

- Selection of the data for study: The study aims to deeply understand how has demonetization affected the Indian economy and caused a change in inflation rates and price levels. Inflation in India can be analyzed with the help of Consumer Price Index. In order to analyze whether inflation has increased or decreased and not remained the same as an impact of demonetization, the figures for CPI has been selected for the period from January 2013 to January 2017.

- Collection of data: The main sources of secondary data are published in newspapers, books, journals, articles, and other research papers.
- Period of Analysis: Ranges from 12 months to 49 months.

Results & Discussion

To achieve the objectives of the study, the collected data has been analyzed in tabular form as well as by using statistical tools like percentages, changes in the price levels, CPI etc. Statistical methods Regression have also been used in order to understand and study the change in pattern of CPI over the years from 2013 to 2016 mainly highlighting whether there has been a change before and after the period of demonetization.

The study is based on the hypothesis:
Classical Linear Regression Model (CLRM) = Constant + Bx (time) + error
H_0: There is no significance of Change in the pattern of Consumer Price Index before and after the demonetization episode against
H_1: There is a significance of Change in the pattern of Consumer Price Index before and after the demonetisation episode.

Skewness and kurtosis is also used to normalize the data.

Table 1: Mean, Median, Skewness and Kurtosis Test on CPI from 2013-2016

Mean	119.7783333
Standard Error	1.141142047
Median	120.1
Mode	120.1
Standard Deviation	7.906064016
Sample Variance	62.50584823
Kurtosis	-0.859040593
Skewness	-0.291223307
Range	26.98
Minimum	104.42
Maximum	131.4
Sum	5749.36
Count	48

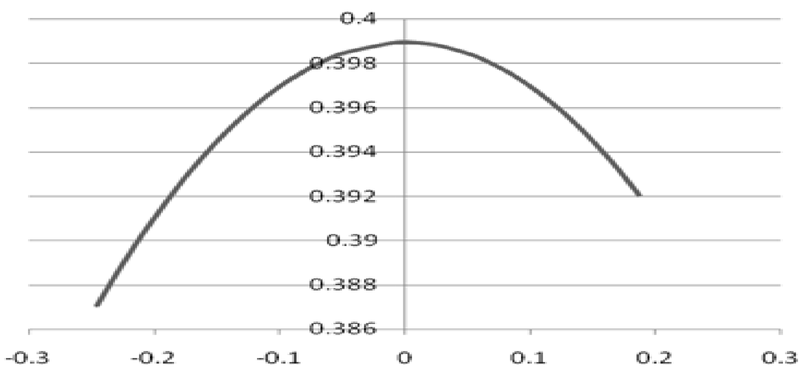


Figure 3: Skewness curve for Consumer Price Index from the Year 2013-16

Table 2: Regression Statistics

Multiple R	0.979008343
R Square	0.958457335
Adjusted R Square	0.957573449
Standard Error	0.006020123
Observations	49

Table 3: ANOVA Analysis

ANOVA	*Df*	*SS*	*MS*	*F*	*Significance F*
Regression	1	0.039299504	0.039299504	1084.366998	4.04603E-34
Residual	47	0.001703369	3.62419E-05	--	--
Total	48	0.041002872	--	--	--

Will Demonetization Impact India's Inflation?

Inflation is defined as a sustained increase in the general level of prices for goods and services. It is measured as an annual percentage increase. The RBI (Reserve Bank of India) considers the CPI (consumer price index) as its primary gauge of measuring inflation. The demonetization that has been in effect since November 9 is expected to have a negative impact on inflation. Consumer spending activity fell to a near halt. Consumers are refraining from making any purchases except essential items from the consumer staples, healthcare, and energy segments. Food item inflation, measured by changes in the Consumer Food Price Index, accounts for 47.3% of the overall CPI. Due to 86.4% of the value of the currency notes in circulation going out of the financial system and re-monetization being slow, the supply and demand of food items fell. It will exert more downward pressure on inflation. Retail inflation eased further to nearly 3-year low of 3.41 per cent in December, reflecting weak demand as consumers grappled with cash crunch following demonetization. The decline in retail inflation has been mainly on account of falling prices of vegetables and pulses. This is the lowest level at least since January 2014. The Consumer Price Index (CPI) based inflation stood at 3.63 per cent in November 2016, as per the data released by the Ministry of Statistics and Programme

A year ago, in December 2015, retail inflation was at 5.61 per cent. Before the period of cash crunch and demonetization in India, the CPI has given us fluctuating results till July 2016. The reasons for such fluctuations can the usual reasons of price changes that caused the inflation to fluctuate. For the year 2016, 131.4 is the highest CPI recorded for the year. The CPI for India has however decreased for the last two months. The main reason for the fall in CPI for the year 2016 during the cash crunch months is demonetization. Now to check whether there has been a significant change in Consumer Price Index, which in turn would reflect change inflation and therefore the values of CPI from the period of January 2013- January 2017 have taken into consideration and a regression test has been done, where the CPI rates are taken as the dependent variable. The test indicates the fact that we should reject the null hypothesis and accept the alternative hypothesis. This implies that the concerned explanatory variable (Consumer Price Index) is statistically significant to explain the variation in the explained variable (time).The overall result suggests that there's been a change in the Consumer Price Index, which then explains the change in inflation before and after the demonetization episode.

Table 4: Result of Regression Test on CPI

	Coefficients	Standard Error	t Stat	P-value	
Intercept	2.08	0.0009	2416.41	2.2323E-121	
X-Variable 1	0.002	6.07351E-05	32.93	4.04603E-34	
	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	2.2323E-121	2.08	2.08	2.08	2.08
X-Variable 1	4.04603E-34	0.002	0.002	0.002	0.002

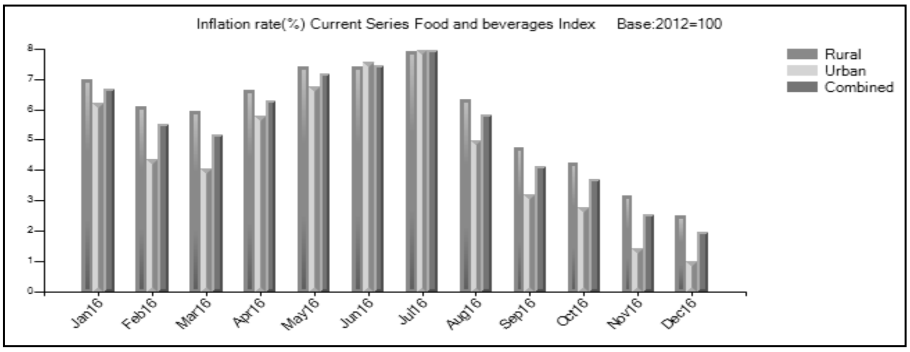
To indicate the fact that demonetization has affected the prices of the commodities and inflation rates especially in the retail sector the rural, urban and combined inflation rates of certain groups have been analyzed to reflect the same. The analysis of the different groups indicate the fact that there has been a change in the price and as well as the inflation rates after the demonetization episode during the last two months of the year (cash crunch months).

These groups are:

1. Food and Beverages: (Table 5 and Figure 4)
   The fall in the overall combined food and beverages index has been about 70.27% from January till December. From the month of October there has been a fall of about 31% in the food and beverages inflation rate. The fall in the month of November and December is due to the cash crunch reasons that our economy was facing. To better understand the impact, there are certain items whose inflationary rates are analyzed along with their price changes over the last 12 months. The analysis of certain items will reflect the fact that there has been a change during the cash crunch months.

Table 5: Food and Beverages Index for the Year 2016

Months	Rural Inflation Rates	Urban Inflation Rates	Combined Inflation Rates
January	7.00	6.23	6.66
February	6.11	4.37	5.52
March	5.93	4.04	5.19
April	6.63	5.78	6.29
May	7.40	6.74	7.20
June	7.42	7.55	7.46
July	7.92	7.95	7.96
August	6.32	4.96	5.83
September	4.73	3.19	4.12
October	4.25	2.79	3.71
November	3.17	1.43	2.56
December	2.51	0.99	1.98
Source: Press releases month wise government of India ministry of statistics and programme implementation central statistics office			



Source: Press Releases Month Wise Government of India Ministry of Statistics and Programme Implementation Central Statistics Office

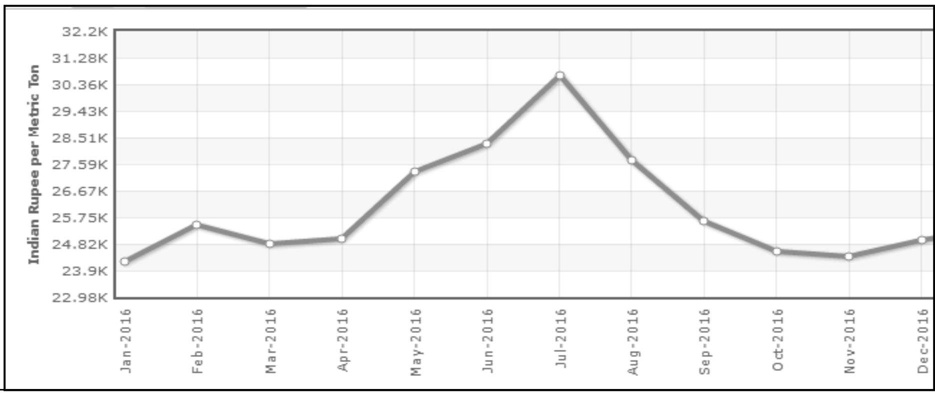
Figure 4: Food and Beverages Index for the Year 2016

2. Rice (Table 6 and Figure 5)
During the month of cash crunch, the fluctuations in the price were such that the price reduced by Rs. 179.4 and increased by Rs.591.01 during the month of November and December respectively. This caused the combined inflation rates to reduce for November and then increase for the month of December.

Table 6: Rice Index for the Year 2016

Month	Price	Change	Combined Inflation (Rural & Urban)
Jan-16	24,190.62	-	-3.37
Feb-16	25,467.63	5.28%	-1.04
Mar-16	24,843.69	-2.45%	-3.01
Apr-16	24,995.87	0.61%	-2.78
May-16	27,344.38	9.40%	-9.4
Jun-16	28,304.04	3.51%	-18.34
Jul-16	30,666.99	8.35%	-18.6
Aug-16	27,726.88	-9.59%	-16.61
Sep-16	25,628.87	-7.57%	-16.91
Oct-16	24,544.63	-4.23%	-12.51
Nov-16	24,365.23	-0.73%	-12.71
Dec-16	24,956.24	2.43%	-9.09

Source: www.indexmundi.com



Source: www.indexmundi.com

Figure5: Changes in Price of Rice Per Metric Ton for the Year 2016

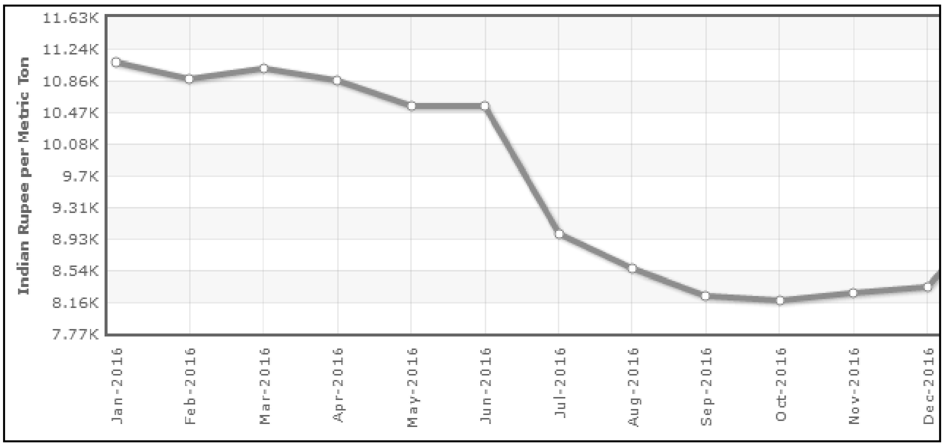
3. Wheat (Table 7 and Figure 6)

The price of wheat since the starting of the year has seen a falling trend. During the cash crunch months the price of wheat have increased The reasons for the increase in price during the months when the country was faced by cash crunch issues can be that as the supply of consumer goods became less, therefore to take the advantage of the situation the retailers might have increased the price of the commodity to earn some profits at that point of the time where the chances to make short term profits is negligible.

Table 7: Changes in Price of Wheat Per Metric Ton for the Year 2016

Month	Price	Change	Combined Inflation
Jan-16	11,073.80	--	-6.7
Feb-16	10,867.71	-1.86%	0.87
Mar-16	10,999.54	1.21%	-1.21
Apr-16	10,858.46	-1.28%	-1.44
May-16	10,536.57	-2.96%	-11.07
Jun-16	10,539.67	0.03%	-11.81
Jul-16	8,981.51	-4.78%	-11.5
Aug-16	8,561.31	-4.68%	-11.5
Sep-16	8,222.60	-3.96%	-12.44
Oct-16	8,179.10	-0.53%	-10.7
Nov-16	8,272.78	1.15%	-10.18
Dec-16	8,337.99	0.79%	-8.12

Source: www.indexmundi.com



Source: www.indexmundi.com

Figure 6: Changes in price of wheat per metric ton for the year 2016

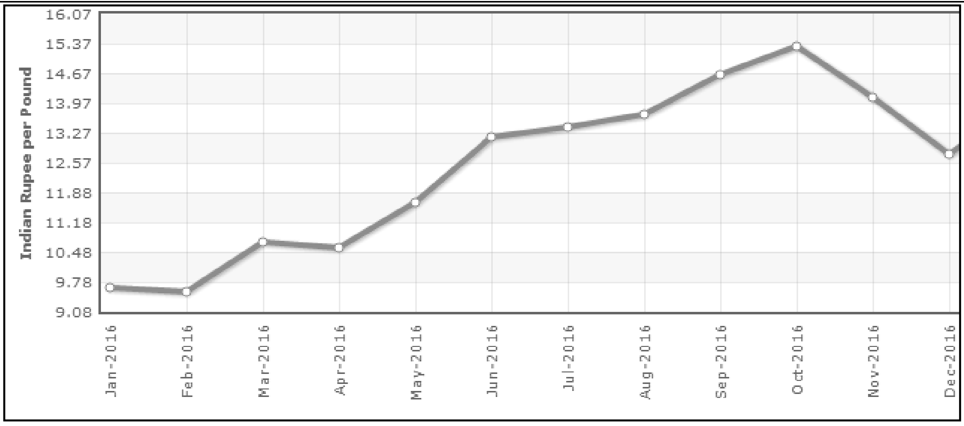
4. Sugar (Table 8 and Figure 7)

The price of sugar saw an increasing trend after the month of April 2016 which kept the combined inflationary rates as positive. However, during the month of November and December the price level reduced and the combined inflation rate managed to reach up to 6.9.

Table 8: Changes in Price of Sugar Per Pound for the Year 2016

Month	Price	Change	Combined Inflation
Jan-16	9.66	--	0.7
Feb-16	9.56	-1.06%	0.6
Mar-16	10.7	11.87%	0.5
Apr-16	10.59	-1.00%	0.5
May-16	11.64	9.91%	1.29
Jun-16	13.17	13.14%	1.19
Jul-16	13.4	1.74%	0.89
Aug-16	13.7	2.28%	1.28
Sep-16	14.64	6.87%	1.47
Oct-16	15.3	4.49%	2.36
Nov-16	14.09	-7.89%	2.86
Dec-16	12.79	-9.28%	6.9

Source: www.indexmundi.com



Source: www.indexmundi.com

Figure7: Changes in Price of Sugar Per Pound for the Year 2016

5. Chicken (Table 9 and Figure 8)

The price till the end of the year has reached up to Rs. 76.73 till the end of the year. The rate of combined inflation has been the second highest in the month of November 2016 and however this rate then reduces to 4.66 as the price has increased by very little proportion.

Table 9: Changes in Price of Chicken Per Pound for the Year 2016

Month	Price	Change	Combined Inflation
Jan-16	75.72	--	7.09
Feb-16	76.5	1.03%	4.98
Mar-16	74.81	-2.21%	6.53
Apr-16	74.15	-0.89%	7.91
May-16	74.9	1.01%	9.54
Jun-16	75.25	0.47%	5.27
Jul-16	74.92	-0.44%	7.53
Aug-16	74.33	-0.79%	6.51
Sep-16	73.64	-0.92%	6.18
Oct-16	73.53	-0.15%	8.19
Nov-16	74.41	1.19%	8.38
Dec-16	76.73	3.12%	4.66

Source: www.indexmundi.com

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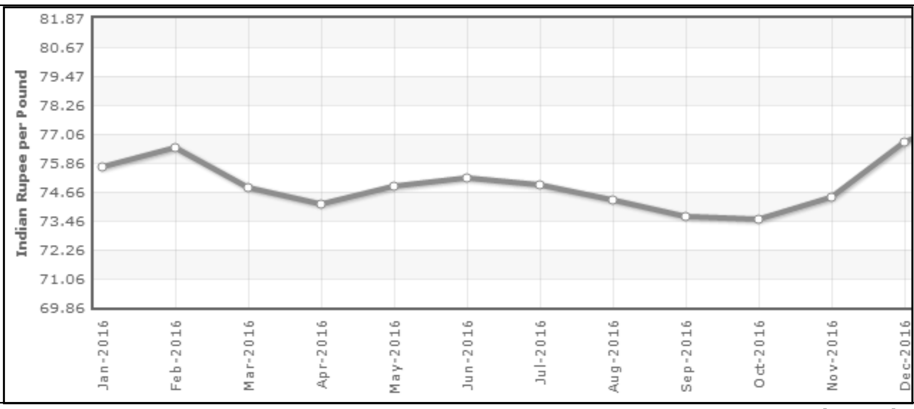


Source: www.indexmundi.com

Figure 8: Changes in Price Of Chicken Per Pound for the Year 2016

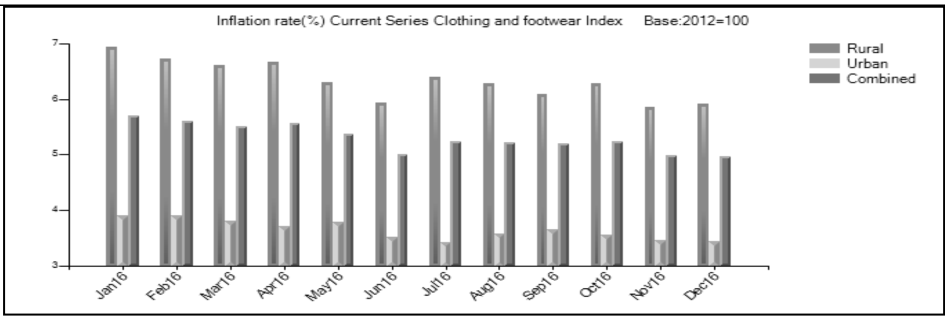
6. Clothing and Footwear (Table 10 and Figure 9)

During the month of November and December the rate of combined inflation has dropped to 4.98 and 4.96 respectively. In the rural sector the fall in the inflation rates has reached up to 5.91 and that in the urban areas is reached to 3.45. fall in the inflation rates is mainly due to the fact that the money supply has dropped in economy due to the demonetization policy. This has pulled down the demand for consumer goods in the retail sector.

Table 10: Clothing and Footwear Index for the year 2016

Months	Rural Inflation Rates	Urban Inflation Rates	Combined Inflation Rates
January	6.94	3.91	5.71
February	6.72	3.9	5.6
March	6.61	3.8	5.5
April	6.67	3.71	5.56
May	6.31	3.78	5.37
June	5.94	3.52	5.01
July	6.39	3.42	5.23
August	6.28	3.58	5.21
September	6.08	3.65	5.19
October	6.28	3.56	5.24
November	5.86	3.46	4.98
December	5.91	3.45	4.96

Source: Press Releases Month Wise Government of India Ministry of Statistics and Programme Implementation Central Statistics Office



Source: Press Releases Month Wise Government of India Ministry of Statistics and Programme Implementation Central Statistics Office

Figure 9: Clothing and Footwear Index for the year 2016

7. Housing (Table 11 and Figure 10)

This sector has experienced fall in the inflation rates because the price level of house property have reduced after the announcement made on 8th of November 2016. An additional announcement in respect of house property was also made on 31st December 2016, indicating that the houses will become cheaper as low interest rate loans will be made available in respect of house property. A Crisil analyst said that the demonetization has a highly negative impact for this sector.

Table 11: Housing Index for the Year 2016

Months	Rural Inflation Rates	Urban Inflation Rates	Combined Inflation Rates
January	-	5.2	5.2
February	-	5.33	5.33
March	-	5.31	5.31
April	-	5.37	5.37
May	-	5.35	5.35
June	-	5.46	5.46
July	-	5.42	5.42
August	-	5.29	5.29
September	-	5.18	5.18
October	-	5.15	5.15
November	-	5.04	5.04
December	-	4.98	4.98
Source: Press Releases Month Wise Government of India Ministry of Statistics and Programme Implementation Central Statistics Office			

Source: Press Releases Month Wise Government of India Ministry of Statistics and Programme Implementation Central Statistics Office

Figure 10: Housing Index for the Year 2016

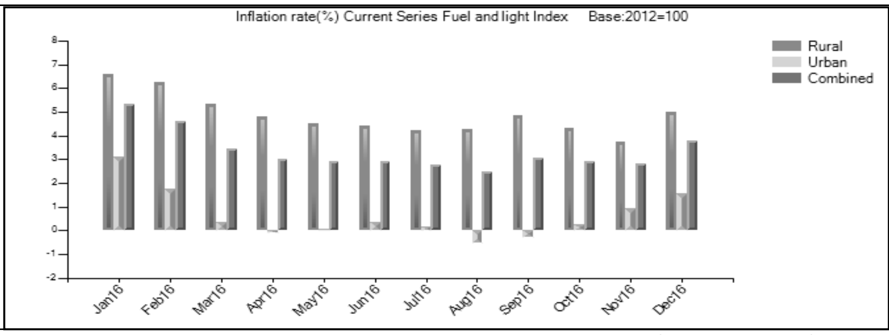
8. Fuel and Light (Table 12 And Figure 11)

The effect of demonetization has also affected the price and as well as the inflation rates for fuel and light. Due to the cash crunch situation faced by our economy, the sale of fuel especially, for petroleum and diesel increased tremendously when it was announced that the petrol pumps will accept the old currencies of Rs. 500 and Rs1000. This as a result affected the price and inflation rates. The inflation rates in the initial days of cash crunch went down in the month of November but by December it managed to come up again.

Table 12: Fuel and Light Inflation Rate for the Year 2016

Months	Rural Inflation Rates	Urban Inflation Rates	Combined Inflation Rates
January	6.59	3.09	5.32
February	6.25	1.75	4.59
March	5.31	0.35	3.47
April	4.79	-0.09	3.03
May	4.51	0.09	2.94
June	4.4	0.35	2.92
July	4.23	0.17	2.75
August	4.28	-0.52	2.49
September	4.85	-0.26	3.07
October	4.34	0.26	2.9
November	3.74	0.96	2.8
December	5.01	1.55	3.77

Source: Press Releases Month Wise Government of India Ministry of Statistics and Programme Implementation Central Statistics Office



Source: Press Releases Month Wise Government of India Ministry of Statistics and Programme Implementation Central Statistics Office

Figure11: Fuel and Light Index for the Year 2016

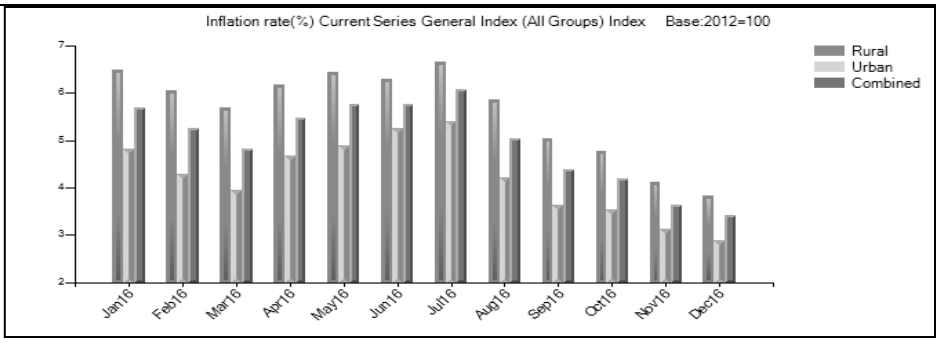
9. General Index (All Groups) (Table 13 and Figure 12)

The combined rate of inflation has shown the highest inflationary rate for the months of November and December have come down to 3.63 and 3.41 respectively as compared to the rate of 5.69 in the beginning of the year.

Table 13: General Index (all groups) for the Year 2016

Months	Rural Inflation Rates	Urban Inflation Rates	Combined Inflation Rates
January	6.48	4.81	5.69
February	6.05	4.3	5.26
March	5.7	3.95	4.83
April	6.17	4.68	5.47
May	6.45	4.89	5.76
June	6.29	5.26	5.77
July	6.66	5.39	6.07
August	5.87	4.22	5.05
September	5.04	3.64	4.39
October	4.78	3.54	4.2
November	4.13	3.13	3.63
December	3.83	2.9	3.41

Source: Press Releases Month Wise Government of India Ministry of Statistics and Programme Implementation Central Statistics Office



Source: Press Releases Month Wise Government of India Ministry of Statistics and Programme Implementation Central Statistics Office.

Figure12: General Index (all Groups) for the Year 2016

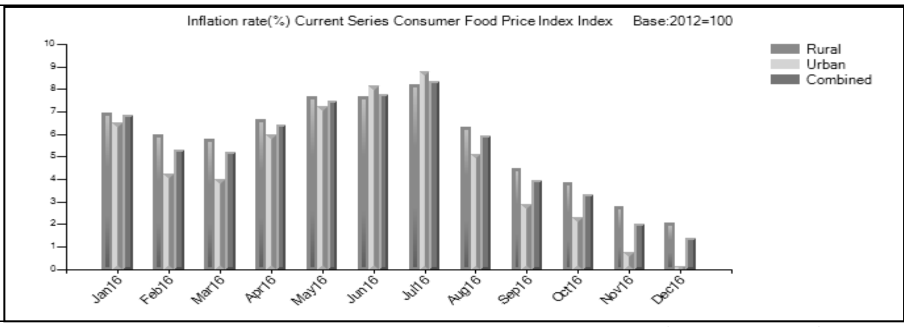
10. Consumer Food Price Index (Table 14 and Figure 13)

The lowest rate of inflation for the consumer food price index for the year has been recorded in the month of December as 1.37. The combined rate of inflation for consumer food price index has been the lowest during the cash crunch months. The main reason for it is the money supply and cash crunch situation faced by the economy during the initial days of demonetization.

Table 14: Consumer Food Price Index for the Year 2016

Months	Rural Inflation Rates	Urban Inflation Rates	Combined Inflation Rates
January	6.93	6.5	6.85
February	5.96	4.23	5.3
March	5.79	3.98	5.21
April	6.66	5.97	6.4
May	7.67	7.24	7.47
June	7.69	8.16	7.79
July	8.18	8.8	8.35
August	6.32	5.1	5.91
September	4.5	2.88	3.96
October	3.86	2.33	3.32
November	2.79	0.75	2.03
December	2.06	0.15	1.37

Source: Press Releases Month Wise Government of India Ministry of Statistics and Programme Implementation Central Statistics Office



Source: Press Releases Month Wise Government of India Ministry of Statistics and Programme Implementation Central Statistics Office

Figure13: Consumer Food Price Index for the Year 2016

Conclusion

The episode of demonetization created havoc throughout the nation on the 8th of November 2016. All the currencies of rupees 500 and 1000 were stripped off. This affected all the people irrespective of the class that they belong. A comparison between the CPI rates, inflation rates and Price levels of the different groups and commodities have been analyzed. The analysis reflects the fact that there has been a change in the price levels and as a result of which the CPI rates before and after the cash crunch months have changed. This then also reflects a change in the inflation rates too. A regression test on the CPI rates during the period 2013-16 has been compared. This is done to suggest whether there has been a change in the consumer price index. The result indicates that there has been a change in CPI over the years (2013-16).

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ORAL PRESENTATION-18

Impact of US Subprime Crisis on Stock Market Integration: Evidence from India and the Countries Covering the Asia-Pacific Rim

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Abstract: Co-movement can be defined explicitly as the pattern of positive correlation. Globalization in the economies had increased the linkages among the stock markets of different economies across the globe. The present study investigates the co movement of the Indian Equity Market with the equity markets of Japan, Hong Kong, South Korea and Malaysia, using co-integration analysis taking into consideration the US Subprime Crisis. The study considers daily closing stock prices covering the period August 25, 2003 to December 30, 2008 (Pre-Crisis Period) and January 5, 2009 to January 31, 2013 (Recovery Period). The results claim that there exists long run relationship between Indian Equity Market and the equity markets of the selected economies in both the sub-periods. This reduces portfolio diversification and thereby, increases the risk of investment in these countries for the investors. Further, Granger-Causality test confirms the existence of short run causality among the selected markets at least in one direction. However, the study will help the policymakers to know about the response of policy measures in one economy to the other due to the growing stock market integration.

Keywords: Co-integration, Granger-Causality Test, Stock Market Integration, Unit Root Test, US Subprime Crisis

Introduction

Indian financial market development few decades ago has been characterized by the changes in restrictions on investments, exchange control and cross-border transactions. Many such restrictions are removed which has led to strong reform in the capital market structures. Many stock exchanges across the globe have experienced entry of outside investors for seeking better returns and risk diversifications of their portfolios. Mervyn King et al. (1994) claimed that the price of risk varies across the countries. However, the paper concludes absence of co-integration among the stock markets.

The liberalization of the equity markets promotes market integration. The transmission of financial crisis turns out to be greater whenever the equity markets across the globe are integrated. However, the changes in the correlations among the stock market returns overtime is a traditional approach to find out the degree of integration among the stock markets. Increase in correlation implies increase in the market integration and thus, the tendency of transmission of any shock from one country to the other becomes higher. However, this approach does not give any robust result since correlations are determined by the short-term noises among the markets. Short-run fluctuations in the closing stock prices often change the long-run relationship among the stock markets.

With the liberalization of the capital markets, the interest of the investors in international diversification increases as it allows the investors to choose from a larger basket of foreign securities. However, this benefit turns out to be limited when the markets are co-integrated implying lack of independent movements leading to portfolio diversification of fewer assets. Diversification implies investing in those equity markets that are less correlated. Markowitz (1952 and 1959), the founder of diversification proposed that, an investor, in order to minimize risk, must invest in different countries.

This paper attempts to investigate the co-movement of the Indian equity market with the equity markets of Japan (Nikkei 225), Hong Kong (Hang Seng), Malaysia (FTSE Bursa) and South Korea (Kospi Composite Index). These countries contribute a lump sum amount of net exports expenditure of India. However, the analysis can be broadened by including some other countries covering this rim that contribute a huge amount of net exports in India like China, Australia, Indonesia, Thailand etc. Japan has the political influence on many Asian countries. Hence, it is expected that the equity markets of Tokyo and that of the other Asian countries must be related. However, this paper breaks the entire data set into two periods-Pre Crisis period and the Recovery period.

US Subprime Crisis and its Impact on the Asian Stock Markets

The subprime mortgage financial crisis of 2007 began in USA. The booming years before the crisis took place, were characterized by low interest rates and large inflow of foreign funds. The banks lent money on the expectation that the housing prices would continue to rise. The banks and other financial institutions repackaged the debts with other high-risk debts and then sold them to the international investors thus, passing the risk from one country to the others. Rise in stock of inventories and rise in interest rates induced the housing prices to fall in 2006-07. Many banks and financial institutions across the globe had experienced losses due to the global distribution of the collateral debt instruments (Onaran, 2008). With the collapse of the financial system in USA, the global financial system was highly affected.

Due to the globalization of the financial sector in India, the financial crisis in the developed economies got transmitted into the Indian financial market, though the extent of crisis was not the same as that of the developed economies. However, the combination of the prospect of the economic slowdown and the rapid sell off by the financial institutions had pulled down the commodities and the stock markets. This led to the fall in the stock prices which fell by 60 percent after the crisis. The BSE Sensex recorded a mark of above 21,000 in January 2008 and again reached below 10,000 in October 2008. The movement in the Sensex was positively and significantly associated with the foreign institutional investments flows in the market. The foreign institutional investors (FIIs) who had made their investment in Bombay Stock Exchange suddenly withdrew their investment. However, the value of Sensex continued to fall in 2009 as well. In this year it had declined to 14,043 on July 6, 2009 due to the net selling by FIIs. Similarly, the financial crisis affected unfavorably some other Asian stock markets.

Table 1: Cumulative Change in Equity Index over 2003 level in Asian Stock Markets (Points)

Index	2007	2008	2009	2010
BSE Sensex	247.4	65.2	199.1	251.2
Hang Seng	121.4	1.1	74.2	83.2
Nikkei 225	43.4	-5.3	-5.3	-4.2
				Source: Walia (2012)

The above table shows the change in equity index value of the share indices of major Asian economies from 2007-2010. 2008 was the worst year for these stock markets that experienced a downward pressure on the share values. However, 2009 and 2010 are the recovery periods where the value of the stock prices recorded a hike. This was due to the implementation of the economic measures by the government of these countries. However, this is not true for Japan as it continued to face severe fall in the share value in 2009 and 2010.

The speed of recovery of most of the Asian stock markets from the crisis may turn out to be higher than the rest of the world. Moreover, this may be higher than their experience in the previous financial crisis in 1997. However, Asia went through certain structural changes in the period of recovery from the previous financial crisis. This will affect the speed of recovery of these economies (Yoshida, 2009).

Over the past few decades, the stock market integration has been one of the interesting areas of research among the academicians. Various researches are done in this area over a range of different time horizon. However, the empirical results vary among the researchers because of change in the frequency of observations (daily, weekly and monthly) and the change in time horizon. Many studies tried to find out the existence of long run relationship between the emerging Asian Equity Markets and the equity markets of developed economies. However, the results claim that the Emerging Asian Equity Markets yield more return at the cost of more risk. Further, there is no long run relationship between the emerging equity markets of Pakistan, India, Sri Lanka and the developed equity markets of Australia, France, UK, Spain, Japan, USA, Canada (Mansoor et. al. 2012). However, the countries covering the Asia-Pacific Rim such as Taiwan, Malaysia, Korea, Singapore and Hong Kong, have long run relationship with the equity markets of USA, UK and Japan, in the period following the Black Monday, 1987 (Wong et.al. 2004). Pakistan, one of the sub-continental economies, exhibit no such long run relationship with the equity markets of Australia, France, Germany, United Kingdom, Japan, USA, India and Hong Kong in the period January 2001 to October 2011. However, the equity market of Canada (TSX Toronto) is the only market that exhibits long run relationship with that of Pakistan (Qadeer & Ahmed, 2013). USA and the ASEAN 5+3 countries are co-integrated in the post-2008 financial crisis period. Further, the equity market of China has significant relationship with that of the other selected countries in both the sub-periods (Mandigma, 2014). Moreover, the Asian stock markets were co-integrated with each other during the deeper global financial crisis, 2008 concluding that the investors in Asian Equity Markets must take into consideration the influence of stock market integration before investing in these markets (Assidenou, 2011). However, the Asian economies such as India, Hong Kong, Russia, China, Japan and Singapore are themselves co-integrated with each other in the post Asian Financial Crisis period (Mehta and Sharma, 2013). This is also true for the selected ASEAN countries, Malaysia, Thailand, Indonesia, Philippines and Singapore whose co-integration rises in the post financial crisis period (Karim and Karim, 2012). Malaysia, one of the Asian economies, have long run relationship with her trading partners, US, Japan and Singapore in the post Asian Financial Crisis period leading to limitation in the international portfolio diversification in these countries (Karim et. al., 2009). However, Hassan (2003) studied the stock market integration among the equity markets of the Gulf-region. The results reveal presence of long run relationship between the share prices of Kuwait and Bahrain. However, in short run, there is no adjustment of the share prices but they move along the trend value. Bhunia (2012) examined linkage between the Indian equity market (BSE and NSE) with indices of some selected Asian markets. However, the results claim that there is a short run association between Indian equity market and the South Asian equity markets (China, South Korea, Taiwan, Hong Kong, Indonesia, Japan, Malaysia and Singapore). However, the Indian equity market has no such common stochastic trend with the South Asian equity markets in long run. Hence, the international investors have the choice of portfolio diversification by investing in South Asian countries.

Methodology

The paper considers daily closing stock returns of the stock indices- BSE Sensex (India), Kospi Composite Index (South Korea), FTSE Bursa (Malaysia), Hang Seng (Hong Kong) and Nikkei 225 (Japan) defined as:

$R_t = \text{Log}\,(P_t/P_{t-1})*100$ ………Closing Return (in percentage) in t-th period of Nikkei 225, Hang Seng, FTSE Bursa and Kospi Composite.

$V_t = \text{Log}\,(P_t/P_{t-1})*100$………. Closing Return (in percentage) in t-th period of BSE Sensex.

The data of all the stock indices are collected from Yahoo Finance. However, the past publications are also verified for other information. All the indices are expressed in local currencies. In order to analyze the impacts of US subprime crisis on the stock market integration, the entire time period has been divided into two periods, namely: Pre-Crisis Period (August 25, 2003- Dec 30, 2008) and Recovery Period (Jan 5, 2009- Jan 31, 2014). However, in order to maintain the evenness in the data series, both the periods contain same number of observations. The missing observations in a stock index probably due to the holidays are entirely omitted from the analysis. However, the US subprime crisis had started in the mid of 2007. We have assumed that the transmission of the crisis to the Asian markets had taken some years such that 2007 and 2008 were not been affected by the crisis. Hence, the recovery period starts from 2009.

In order to fulfill the objectives of the paper, some statistical tests are used.

- Finding out the Descriptive Statistics of all the concerned stock returns in both the periods of analysis. This is done in order to find out the temporal and stochastic properties of the data series.

- Test for the stationarity of the data series by applying Augmented Dicky-Fuller (ADF) Test.

The unit root test is applied to avoid the possibility of spurious regression which is often realized when any statistical test is done on the non-stationary data series. In that situation, the estimated t-statistic gets inflated leading to rejection of the null hypothesis of insignificance of the corresponding explanatory variable, though the actual model is statistically insignificant. In order to avoid such misleading results in any statistical test, the first and foremost job is to make the data series stationary. If the original series turn out to be non-stationary, then we transform the data series into difference form and say that it is integrated of order one [I (1)]. However, in this paper, the closing prices are already transformed into difference form to calculate the stock return of the indices. Hence, they should be integrated of order zero [I (0)].

If the absolute value of the computed ADF test statistic turns out to be greater than that of its critical value at 5% level of significance, we reject our null hypothesis where the null hypothesis is the presence of unit root or absence of stationarity. If the original series turns out to be non-stationary then we again go for unit root test at first difference. This process will continue until and unless the series turns out to be stationary.

To find out the optimal lag-length of the Vector Auto-regression (VAR)

The lag length determination is important as when the lag length differs from its true value, the estimates of a VAR turn out to be inconsistent, so are the impulse response functions (Braun & Mittnik, 1993). The optimal lag length is chosen using Akaike Information Criterion (AIC) due to its superiority [Gonzales and Petrakis, 2002] defined as:-
$AIC = \log|\sum| + (2k^2p)/T$

where, k= no. of variables in the model, p= no. of lag terms in the model, T= no. of observation, ∑= variance-covariance matrix

To find out long run relationship between stock returns of Sensex and other indices applying Johansen Co-integration Test

Co-integration analysis is inherently multivariate, as a single time series cannot be co-integrated. If two time series data are non-stationary, i.e. they have trend and their patterns of trend are similar, then we say that their linear combination, i.e. the error term is stationary or white noise. Hence, we can perform any econometric test on the non-stationary process itself. In that case, the two variables are co-integrated. In other words, if the two variables are non-stationary but they are co-integrated then we can say that their linear combination is stationary and hence, any econometric test can be applied on the non-stationary series itself. Hence, if the two time-series variables are integrated of same order, then they must be co-integrated.
We formulate two statistics, Maximum Eigen Value and Trace Statistic defined as:

Trace Statistic: $\text{Trace} = -T \sum \text{Log}\,(1-\lambda^1_t)$ $\quad t=r+1,\ldots, p$
where, $\lambda^1_{r+1},\ldots, \lambda^1_p$ are (p-r) no. of estimated eigen values.

Maximum Eigen Value Statistic: $\lambda_{max}\,(r, r+1) = -T \log\,(1-\lambda^1_{r+1})$

If the absolute value of the computed trace statistic is greater than its critical value, then we reject null hypothesis of no co-integration and claim that there exists at least one-way co-integration relation between the variables at 5% level of significance. Again we apply the same logic for the Eigen value as well.

Finding out the Causal Relationship among the Aforesaid Variables Applying Granger-Causality Test

The following Vector Autoregressions (VAR) are tested:

$\Delta V_t = \sum \alpha_i^1 \Delta V_{t-i} + \sum \beta_j^1 \Delta R_{t-j} + U_{1t}$......... (7)$\Delta R_t = \sum \lambda_j^1 \Delta R_{t-j} + \sum \delta_i^1 \Delta V_{t-i} + U_{2t}$...... (8)
i=1,2…..m; j= 1,2,…..n

The error terms are uncorrelated. We jointly test for the hypothesis that the estimated lagged coefficients $\sum \alpha_i$ and $\sum \lambda_j$ are different from zero by running an F-test. When the null-hypothesis of insignificance of the model is rejected at 5% level of significance, we claim that there prevails causal relationship among the variables. However, it is a short run approach.

Results & Discussion

Descriptive Statistics

Table 2: Descriptive Statistics Results

	FTSE MALAYSIA		HANG SENG		KOSPI COMPOSITE		NIKKEI 225		BSE SENSEX	
	Pre-Crisis	Recovery	Pre-Crisis	Recovery	Pre-Crisis	Recovery	Pre-Crisis	Recovery	Pre-Crisis	Recovery
Mean	0.007	0.02	0.01	0.01	0.01	0.02	-0.006	0.02	0.03	0.02
Std. Dev	0.42	0.46	0.79	0.66	0.77	0.57	0.77	3.02	1.11	0.78
Skewness	-1.20	0.53	0.02	1.19	-0.05	-0.006	-0.68	0.41	-1.24	0.32
Kurtosis	15.04	198.38	13.45	16.86	11.59	6.95	13.00	507.85	87.30	76.26
Jarque-Bera	7101.11	1795.91	5144.91	9310.24	3478.90	735.12	4795.78	1198.98	3348.68	2524.80
Probability	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Observations	1130	1130	1130	1130	1130	1130	1130	1130	1130	1130

Pre-Crisis Period: Table 3 represents the Descriptive Statistics of the stock returns. Other than Hang Seng, all the other indices experience negative skewness. Sensex has the highest skewness (-1.24) followed by FTSE Bursa. The kurtosis values reveal that the stock returns are leptokurtic (kurtosis>3) with Sensex recording the highest kurtosis. Both the values of skewness and kurtosis as well as the p-values of Jarque-Bera test claim that the frequency distributions are not normal. However, if we look into the average return of the indices, it is found that except for Nikkei 225, all other indices exhibit positive average return. Sensex records the highest average return with maximum volatility (S.D=1.11) confirming the Theory of Finance (riskier the market, higher would be the return).

Recovery Period: In this period, other than Kospi Composite Index, all other indices are positively skewed. Hang Seng has the highest skewness. The Kurtosis values claim that all the stock returns are leptokurtic. The values of skewness and kurtosis claim that all the stock returns are not normally distributed. This is also verified from the p-values of Jarque-Bera test that rejects the null hypothesis of presence of normality at 5% level of significance. Moreover, the average returns are positive for all the stock indices with Sensex recording the highest average return. However, Nikkei 225 is the most risky index (S.D=3.02) disobeying the Theory of Finance. Other than Sensex, the average return in the recovery period is higher than that in the pre-crisis period for all the stock indices.

Table 3: Unit Root Test Results

Variables	Trend & Intercept (At Level)				
	Estimated T-Statistic	Critical Value (5% Level of Significance)	Critical Value (1% Level of Significance)	P-Value	Decision
SENSEX	-38.97	-3.41	-3.96	0.00	Reject Ho
HANG SENG	-26.32	-3.41	-3.96	0.00	Reject Ho
NIKKEI 225	-33.90	-3.41	-3.96	0.00	Reject Ho
FTSE BURSA	-30.64	-3.41	-3.96	0.00	Reject Ho
KOSPI COMPOSITE	-32.66	-3.41	-3.96	0.00	Reject Ho

Unit Root Test: Table 4 represents the unit root test results considering both the sub-periods. Since, stock return is itself represented as the differenced form of the closing prices, hence, all the stock returns are stationary at level itself. This is true in both the periods of analysis implying rejection of the null hypothesis of the presence of unit root (absence of stationarity) at both 1% and 5% levels of significance. Hence, the stock returns for all the indices are integrated of order zero [I (0)].

Bivariate Co-integration Test

Table 4: Co-integration Test Results

Periods	Hypothesis Tested	Eigen Value	P-Value (Trace Statistic)	P-Value (Maximum Eigen Value)	Optimal Lag Length
Null Hypothesis: No Cointegration Between Sensex & Hang Seng					
Pre-Crisis	None*	0.35	0.0001	0.0001	2
	At Most 1*	0.27	0.00	0.00	
Recovery	None*	0.13	0.0001	0.0001	8
	At Most 1*	0.09	0.00	0.00	
Null Hypothesis: No Cointegration Between Sensex & Nikkei 225					
Pre-Crisis	None*	0.21	0.0001	0.0001	5
	At Most 1*	0.16	0.00	0.00	
Recovery	None*	0.22	0.0001	0.0001	7
	At Most 1*	0.09	0.00	0.00	
Null Hypothesis: No Cointegration Between Sensex & Ftse Bursa					
Pre-Crisis	None*	0.20	0.0001	0.0001	5
	At Most 1*	0.13	0.00	0.00	
Recovery	None*	0.21	0.0001	0.0001	5
	At Most 1*	0.14	0.00	0.00	
Null Hypothesis: No Cointegration Between Sensex & Kospi Composite					
Pre-Crisis	None*	0.13	0.0001	0.0001	8
	At Most 1*	0.09	0.00	0.00	
Recovery	None*	0.11	0.0001	0.0001	8
	At Most 1*	0.09	0.00	0.00	
**Rejection of hypothesis at 0.05 level of significance*					

Since, all the stock returns are integrated of same order, hence, we can say that their linear combination (error term) is stationary. Thus, we try to test for the presence of long run relationship among the stock returns of Asian Markets and BSE Sensex by applying Bivariate Cointegration Test. Hence, in each period, we test four hypotheses-

- No cointegration between Sensex and Hang Seng.
- No cointegration between Sensex and Nikkei 225.
- No cointegration between Sensex and FTSE Bursa.
- No cointegration between Sensex and Kospi Composite.

Moreover, the optimal lag length is chosen for each of the hypothesis testing based on the Akaike Information Criterion (AIC) due to its superiority as the best performing criterion in the lag length selection. The chosen lag length should give the minimum value of AIC. However, the test result is represented in table V.

The analysis considers both the trace statistics and maximum Eigenvalue. However, both the statistics claim that there is more than one cointegrating relationship among the variables. However, since it is a bivariate cointegration test, hence, there exists only two variables, such that there can be up to one cointegrating rank. Thus the null hypothesis of no cointegration is strictly rejected at 5% level of significance in favor of at least one cointegrating equation. This implies presence of long run cointegration among the stock returns of the concerned indices. This denotes that the stock market returns of the markets covering the Asia-Pacific rim and BSE Sensex do not drift apart and they share common stochastic trend in long run.

Table 5: The Normalized Cointegrating Equations

Pre-Crisis Period		Recovery Period	
SENSEX = 1.01(HANG SENG)	[28.82]	SENSEX = -15.69(HANG SENG)	[-3.52]
SENSEX = 1.16 (NIKKEI 225)	[20.86]	SENSEX = 0.26 (NIKKEI 225)	[1.26]
SENSEX = 0.99 (FTSE BURSA)	[12.61]	SENSEX = 0.38 (FTSE BURSA)	[2.12]
SENSEX = 1.20 (KOSPI)	[18.01]	SENSEX = -1.25 (KOSPI)	[-1.96]

The values in the parenthesis represent the estimated t-statistics of the estimated slope coefficients.

Pre-Crisis Period: In this period, all the indices are positively cointegrated with Sensex. The absolute value of the estimated t-statistics turns out to greater than 2 for all the indices, implying that the corresponding index statistically significantly explains Sensex in long run. However, except for FTSE Bursa, for all other indices, a 1% rise in stock return increases the stock return of Sensex by more than 1%. For FTSE Bursa, the stock return of Sensex rises proportionately. However, the rise in stock return of Sensex is maximum when Kospi Composite Index exhibits a 1% rise.

Recovery Period: In this period, Hang Seng and Kospi Composite are negatively related with Sensex in long run. However, Nikkei 225 and Kospi Composite indices are statistically insignificant variables to explain Sensex. A 1% rise in stock return of Hang Seng and Kospi Composite Indices induce the Sensex stock return to fall by 15.69% and 1.25% respectively. The other indices affect the stock return of Sensex positively and in a relatively less magnitude.

Granger-Causality Test

Table 6: Granger-Causality Test Results

Null Hypothesis (H_0)	P-Value		Decision	
	Pre-Crisis	Recovery	Pre-Crisis	Recovery
Nikkei 225 Does Not Granger Cause Sensex	0.00	0.00	REJECT H_0	REJECT H_0
Sensex Does Not Granger Cause Nikkei 225	0.00	0.00	REJECT H_0	REJECT H_0
Hang Seng Does Not Granger Cause Sensex	0.00	0.009	REJECT H_0	REJECT H_0
Sensex Does Not Granger Cause Hang Seng	0.06	0.00	ACCEPT Ho	REJECT H_0
Ftse Bursa Does Not Granger Cause Sensex	0.00	0.74	REJECT H_0	ACCEPT Ho
Sensex Does Not Granger Cause Ftse Bursa	0.01	0.00	REJECT H_0	REJECT H_0
Kospi Composite Does Not Granger Cause Sensex	0.00	0.06	REJECT H_0	ACCEPT Ho
Sensex Does Not Granger Cause Kospi Composite	0.02	0.00	REJECT H_0	REJECT H_0
**Rejection of hypothesis at 0.05 level of significance*				

Co-integration detects the presence of long run relationship among the variables, at least in one direction. However, the Granger-Causality test detects the short run causality among the variables. However, the chosen lag length is the same as that of the cointegration test. Table VI represents Granger-Causality test results.

Pre-Crisis Period: In this period, there exists bi-directional causality among the concerned indices, except between Sensex and Hang Seng that records uni-directional causality. Though Hang Seng granger causes Sensex but the converse is not true. Thus, any change in the stock returns of Hang Seng, Nikkei 225, FTSE Bursa and Kospi Composite Index will affect the stock return of Sensex in short run. Therefore, any development in Japan, Hong Kong, Malaysia and South Korea should be considered by the shareholders of Bombay Stock Exchange.

Recovery Period: In this period, there prevails bi-directional causality between Sensex and Nikkei 225 and Sensex and Hang Seng., whereas uni-directional causality between FTSE Bursa and Sensex and Kospi Composite Index and Sensex. Sensex granger causes FTSE Bursa and Kospi Composite but the converse is not true. Hence, any change in the stock return of FTSE Bursa and Kospi Composite will not affect the stock return of Sensex. In other words, any development in Malaysia and South Korea will not get transmitted to India in short run.

Conclusion

The present study investigates the causal linkage among the Indian Equity Market and the equity markets of Japan, Hong Kong, South Korea and Malaysia before and after the US Subprime Crisis. Among all the stock markets, Indian Equity Market gives the maximum return in both the periods. However, the volatility is also maximum for this market in the pre-crisis period, confirming the Theory of Finance (riskier the asset, more is the return). However, the volatility is maximum for Kospi Composite Index in the recovery period, thereby, disobeying the theory. However, the selected stock indices have long run relationship with BSE Sensex both before and after the financial crisis. This implies that the stock returns of the indices of the selected economies and that of India do not drift apart and they share common stochastic trend in long run. In the pre-crisis period, all the selected Asian stock markets are positively and statistically significantly cointegrated with Sensex. However, in the recovery period, Hang Seng and Kospi Composite indices exhibit negative cointegration with Sensex. Hang Seng in the recovery period, influences Sensex negatively and statistically significantly at a very high magnitude. Cointegration among the markets proves the absence of portfolio diversification in long run. However, Granger-Causality test claims the presence of bi-directional causality between Sensex and other selected indices in the pre-crisis period, other than Hang Seng, that granger causes Sensex, though the converse is not true. However, in the recovery period, Kospi Composite Index and FTSE Bursa exhibit unidirectional causality with Sensex, whereas, the other two indices exhibit bidirectional causality. However, the analysis can be broadened by including some other countries covering this rim that contribute a huge amount of net exports in India like China, Australia, Indonesia, Thailand etc.

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ORAL PRESENTATION-19

Connectivity of Global Connectedness with Macro Environmental Elements: An Analysis on India

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Abstract: Global connectedness of a country signifies the connectivity with various nations through different forms of trading. Global connectedness has been measured by Global Connectedness Index (GCI). Generally, it focuses on the flow of trade, capital, information and human being of nations. Connectedness of country may be influenced by various macro environmental elements like, Human Development Index (HDI), Corruption Perception Index (CPI), Global Peace Index (GPI), Global Terrorism Index (GTI), Inflation Rate, Dependency Ratio, Education Rate etc. This study aims to identify and analysis the effect of the above mention macro environmental elements on global connectedness of India. Multiple Regression model has been implemented on ten years (2006 to 2015) related data of macro environmental elements and global connectedness for calculation of results. Result of reveals that some determinants like CPI, GPI, Dependency Ratio satisfy hypothesis and among them CPI and Dependency have significant effect on global connectedness of India during the sample period. Another side other elements unable to satisfy hypothesis but they have significant effect on global connectedness of India during sample period.

Key Words: Global Connectedness Index, Macro Environmental Elements, Multiple Regressions.

Introduction

Globalization is a growing interaction and interdependent process of economy and society among various nations of a large distance (Vujakovic, 2001). Effective use of all resources is possible through globalization (Fischer, 2003). It helps Individual of various nations for enjoying the facilities of resource mobilization (Edwards, 1998). Same way, technology, education, culture also affected by globalization (Dreher, 2006). It effects not only limited within economic and social aspects of nation but politics also affected by it. Economic, social and politics are treated as three pillar of globalization (Kearney, 2007). So, it has multiple effects. It is a multidimensional approach and the composite form of various indicators (JRC/OECD, 2008).

Degree of globalization has been measured through Global Connectedness Index, prepared by Pankaj Ghemawat and Frank Appel. Global Connectedness of a country depends on country's macro and micro environmental elements (Birnleitner, 2013). Various environmental elements are suppliers, customers, labour, trade union, human development, education of individual, inflation rate etc (Kalpana, 1986). So, it can be said that Global Connectedness is the function of various environmental elements. It also be expected that these elements have effect on global connectedness of any country.

This paper is designed by using some sections. Introduction of the study is represented by section-I. Review of literature has been depicted by section-II. Research Gap and Objective of the study highlighted through section-III. Section-IV deals with hypotheses development based on seven macro environmental elements. Research Methodology and Data collection source is highlighted by section-V. Analysis of result is presented by section-VI and section-VII is devoted for conclusion of the study.

Global Connectedness measures the degree of connectivity of any country with rest of the world. It measure through global connectivity index prepared by Ghemawat and Apple. This index is consists of three dimensions i.e. depth, breadth and directionality. Depth indicates the cross-border connection of any country in terms of GDP. Dimension breadth presents how broadly country's international flows distributed among various nations. And inward verses outward flows are measured by directionality (Kumar, 2015). Globalization acts as a driver of global connectedness (Obwana, 2001).

The term internationalization and globalization are used for many economic aspects (Adler, N. J., 2008). It affects the growth of any country (Dreher, 2006). Globalization of any country depends on various elements of environment. Pfaff (2004) investigates that it is affected by PEST i.e. political environment, economic environment, social environment and technological environment. Researcher Hofstede (2001) conducts research on culture and its effect on globalization. He found out that five cultural dimensions i.e. Power Distance (PDI), Uncertainty Avoidance (UAI), Individualism Versus Collectivism (IND), masculinity versus femininity (MAS) and long-term versus short-term oriented persons (LTO) affect globalization procedure. In a study McCarthy (1975) defines five various segments of macro environmental elements i.e. objective and resources of the firm, present business circumstances, social & cultural environment, political & legal environment and economic environment influence the entry of new foreign business in a country. In another study Kieser and Kubicek (1976) evaluate that competitive situation, customer structure, dynamic of technology, task specific environment, and social condition, cultural conditions etc create influence on globalization of a country. Ansoff (1997) conducts study and investigate that adjustment of internal environment with external environment is essential for multinational companies. Mintzberg (2009) and Skinner (1964) examine that materials, relative costs of labour, overhead, equipment, capital, availability of credit taxes, cyclical activity, stability-inflation growth, forecast ability, foreign exchange, competition, distribution system, tariffs, mass media for communication, the availability of talents and skills, the purchasing power of individual etc have impact on globalization. Karlsson et al. (2012) conduct study and investigate that education and skilled employee are more attractive for globalization. Trompenaars (1994) examines that various elements of culture affect the globalization. As per his views culture is the combination of human relationships, the feeling and interpreting of time and the attitude to the environment. In another side cross-border culture, perception of foreign life style by the individual of a country may influence the adoption capability of globalization of the country (Monda et al., 2007; Popkin, 1999; Rivera et al., 2002; Swenburn, 2011). Globalization influences the balance of power it also help to change the market economy, social and environmental conditions and collective action of internal agencies (Zarsky 1997).

Objectives of the Study

Globalization is affected by various environmental like political, economic, technological and social environment of any country. Cultural dimensions, employee's skill, relative cost of labour, foreign exchange rate, perception of foreign lifestyle of any country also affects the globalization flow of this country i.e. global connectedness. Above literatures also clear that globalization changes the balance of socio-economic power of any country. Education and skilled workers also play vital role for enhancing the degree of globalization. So it can be said that global connectedness is influenced or affected by various environmental elements. These may be macro or micro environmental. It is expected that except these elements other macro environmental like global terrorism index, global perception index, corruption perception index, inflation rate, dependency ratio and education have effect on global connectedness. But existing literature unable to presents the effect of these macro environmental elements on global connectedness. This is the research gap of present study.

Hence, objective of the present study is to identify the effect of above mention macro environmental elements on global connectedness and investigate the more effective elements for improving the global connectedness of India.

Hypotheses Development

Development of hypotheses based on seven macro environmental elements:

Human Development Index

The Human Development Index (HDI) is a summary composite index which measures a country's average achievements in basic three aspects of human development i.e. knowledge, health and income (Reyles, 2011). It is a more compact welfare outcome of a country (Lehnert, Benmamoun, & Zhao, 2013; Sharma & Gani, 2004). HDI has been developing through various ways. Foreign direct investment i.e. globalization is affected by it (Agosin and Machado, 2005; Al-Sadig, 2013). Researchers Reiter & Steensma, (2010) suggest that Human Development has a positive but small effect on globalization. So it has effect global connectedness. Hence, following hypothesis can be drawn from this argument:

H_1 (Hypothesis 1): There is a positive relationship between Global Connectedness and Human Development Index.

Corruption Perception Index

Corruption has a negative impact on globalization (Hines, 1995 and Wei,2000). Smarzynska and Wei (2000) suggest that corruption reduces transparency, makes local bureaucracy; hence foreign direct investors are less interested to invest in corrupted country. But a reverse result is depicted by the study of Henisz (2000). He examines the effect of corruption on new foreign business market entry and ownership mode for US based multinational companies. Unfortunately result of his study reveals that coefficients of corruption on new foreign business entry are insignificant that represent corruption is associated with global connectedness. But generally it is expected that corruption creates a negative impact on global connectedness. Hypothesis for this element can be represented as follows:

H_2 (Hypothesis 2): There is a negative relationship between global connectedness and corruption perception index.

Global Peace Index

Environmental stability and peacefulness helps generate trade friendly economic policy (Copeland and Taylor, 2013). Peaceful environment act as developmental criteria of any trade related activity. Intensity of peace of any country is measured through Global Peace Index (GPI). It is an attempt to measure the relative position of nations' and regions' peacefulness (Wikipedia). Hence, it is expected that global connectedness depends on peacefulness and economic stability of country. These explanations help to establish the hypothesis as following way.

H_3 (Hypothesis 3): There is a positive relationship between Global Peace Index and global connectedness.

Global Terrorism Index (GTI)

Terrorism is the use of violence or threat of violence in order to purport a political, religious, or ideological change (Wikipedia). Degree of terrorism movement has been measured through Global Terrorism Index (GTI). It is an attempt to prepare ranks systematically the nations of the world according to terrorist movement (Fandl, 2003). This activity in a country creates direct negative impact on trade activities (Nitsch and Schumacher, 2003). Researcher S.W. Polachek (2004) also examines the negative association between trade and terrorism movement. It can be concluded that, global connectedness is negatively affected by Global Terrorism Index. Following hypothesis can be derived from the above explanation.

H_4 (Hypothesis 4): There is a negative relationship between Global Terrorism Index and inflow of global connectedness.

Inflation Rate

Inflation can be defined as a sustained increase in the general level of prices for services and goods. It is measured as an annual percentage increase. As inflation rises, every dollar you own buys a smaller percentage of a good or service (Wikipedia). High rate of inflation creates many economical problems and act as threat before the growth of economy. It also slows down the economic growth of any country (Ashra, 2002). In case of highly inflationary situation development of trade is dismissed (Ramzan et.al. 2013). Hence, it can be argued that highly inflationary condition is unfavourable for inflow of global connectedness.
So, hypothesis on the basis of this argument can be drawn as follows:

H_5 (Hypothesis 5): There is negative relationship between inflation rate and inflow of global connectedness.

Dependency Ratio

In economics, geography and demography the dependency ratio is an age-population ratio of those typically not in the labour force (the dependent part) and those typically in the labor force (the productive part). It helps to measure the pressure on productive population (Wikipedia). So there should be negative relationship between global connectedness and dependency ratio. Hypothesis relating with dependency ratio can be derived as follows.

H_6 (Hypothesis 6): There is a negative relationship between dependency ratio and global connectedness.

Education

A significant and positive relationship exists between level of education and the development of business (Burnett and Palmer, 1984; Truett and Truett, 1990). According to Truett and Truett (1990) higher level of education helps the people to aware about all types of development. Outreville (1996) suggest a positive relationship between higher level of education and demand new foreign entrepreneurship. It seems to clear that education influences the globalization. So education related hypothesis can be derived as follows:

H_7 (Hypothesis 7): There is a positive relationship between education level and global connectedness.

Methodology

This section can be presented by using four parts. These are Part –I for data collection, Part-II describe measurement of variable, Part –III is devoted for calculation techniques of variable and Part-IV explains the methodology.

Data Collection

This study has been developed by using 10years (2006 to 2015) data relating to India which are collected from the sources of various international agencies and World Bank data base.
Measurement of Variables:

Two type variables have been considered, namely dependent and independent variable. These are as follows:

- Dependent Variable: Eleven years Global connectedness index of India has been considered as dependent variable of this study.

- Independent Variable: Seven variables have been considered here and logical process has been resorted for establishing these variables as independent variable for global connectedness of any country.

Calculation Techniques of Variables

- *Human Development Index*: The Human Development Index (HDI) is a combined measure of average achievement of key dimensions of human development i.e. a long and healthy life, being knowledgeable and have a decent standard of living. The HDI is the geometric mean of normalized indices for each of the three dimensions (Human Development Report). Higher score indicates higher development of human life.

- *Corruption Perception Index*: The Corruption Perceptions Index is the result of public sector survey. It measures the perceived levels of public sector corruption in countries worldwide. It based on expert opinion; countries are scored from 0 (highly corrupt) to 10 (very clean). Some countries score well, but no country scores a perfect 100. (Petrobas, 2012).

- *Global Peace Index*: Higher value of this index represents high peace and vis-a-vis. Value of this index varies from 0 (Zero) to 1 (one). The index gauges global peace using three broad themes: the level of safety and security in society, the extent of domestic and international conflict, and the degree of militarization. Factors are both internal such as levels of violence and crime within the country and external such as military expenditure and wars. The Global Peace Index (GPI) is an attempt to measure the relative position of nations' and regions' peacefulness. It is the product of the Institute for Economics and Peace (IEP) and developed in consultation with an international panel of peace experts from peace institutes and think tanks with data collected and collated by the Economist Intelligence Unit (Wikipedia).

- *Global Terrorism Index*: The Global Terrorism Index (GTI) is an attempt to represent systematic rank the nations of the world according to terrorist activity. The index combines a number of factors associated with terrorist attack. It is the product of Institute for Economics and Peace (IEP) and is based on data from the Global Terrorism Database (GTD) which is collected and collated by the National Consortium for the Study of Terrorism and Responses to Terrorism (START) at the University of Maryland. Higher value of this index provides high terrorism activity and vis-à-vis. It varies between zero (0) to one (1) (Wikipedia).

- *Inflation*: Inflation rate is calculated by using consumer price index. It reflects the annual percentage change of consumer price index to average consumer price index for goods and services that may be changes or fixed. The Laspeyres formula is generally used for calculation of inflation rate.

- *Dependency Ratio*: In this ratio the dependent part usually includes those under the age of 15 and over the age of 64.The productive part makes up the population in between, ages 15 – 64.

- *Education*: Total enrolment in primary education is considered here, regardless of age, expressed as a percentage of the population of official primary education age. Gross Enrolment Rate can exceed 100% due to the inclusion of over-aged and under-aged students because of early or late school entrance and grade repetition.

Multiple regression model has been used as method for analyzing the result of this study by taking log both side. Following regression equation represents the relationship of various said macro environmental elements on global connectedness.

$$LGCI = \beta_0+\beta_1 LHDI+\beta_2 LCPI+\beta_3 LGPI+\beta_4 LGTI+\beta_5 LIR+ \beta_6 LDR+ \beta_7 LER+e$$

Table 1: Explanation of Variables

Variable	Description
LGCI	Log of Global Connectedness Index
LHDI	Log of Human Development Index.
LCPI	Log of Corruption Perception Index.
LGPI	Log of Global Peace Index.
LGTI	Log of Global Terrorism Index.
LIR	Log of Inflation Rate.
LDR	Log of Dependency Ratio.
LER	Log of Education Rate.

Results & Discussion

Result of descriptive statistics is shown in Table 2. Deviation of Global Connectedness Index (1.399) among sample years is lower than other variable. Coefficient of variance signifies the consistency of data among sample period. Value of coefficient variance of Global connectedness (0.8415) indicates more consistency among sample period than other variables.

Table 2: Descriptive Statistics

Dimensions	Mean	Std. Deviation	Coefficient of Variance	N
Connectedness	166.2554	1.39906	0.84151252	10
HDI	173.6691	4.32572	2.49078276	10
CPI	52.902	3.39633	6.42004083	10
GPI	38.9679	1.75742	4.50991714	10
GTI	88.9134	1.47076	1.65414887	10
Infl_Rate	90.1504	14.22324	15.7772345	10
Depen	175.3185	1.82601	1.04153869	10
Edu	203.1639	3.41598	1.68139123	10

Among independent variables dependency ratio is more consistent (1.04) during sample period. It indicates fluctuation through the period of this data is very lower and rate of depended people not improve or reduce during the sample period. Coefficient variance of this descriptive statistic also highlights that intensity of fluctuation of inflation rate of India is very high (15.78) during the sample period. Result also shows that movement of education rate in India is generally stable (1.68) for sample period. Global corruption index coefficient variance presents moderate degree of consistency during the sample period (6.42). It can be said that our country is not free from corruption. Consistency of global peace index is not very lower that imply economic, political and social stability is not constant in India.

It is expected that these seven independent variables influence the global connectedness of India with rest of the world. Effect of these independent macro environmental elements on global connectedness of India during study period can be presented by the following table (Table 3).

Table 3: Coefficient

Model	Beta	t	Sig.
(Constant)		7.522	0.017
HDI	-4.535	-6.628	0.022*
CPI	-4.292	-7.248	0.019*
GPI	0.266	0.744	0.534
GTI	2.984	6.313	0.024*
Inflation Rate	.916	4.062	0.056**
Depen	-9.337	-6.983	.020*
Edu	-5.523	-6.925	.020*
Note: '*' stand for significance at 5% level and '**' stand for significance at 10% level.			

Human development index (HDI) has negative impact (-4.535) of global connectedness in India during the study period and the value of this effect is significant at 5% level but this value of effect does not satisfy our alternative hypothesis. Corruption perception Index (CPI) satisfies the alternative hypothesis and it also significant at 5% level. Result of CPI indicates enhancement of corruption act as a barrier of global connectedness and vis-à-vis. Existence of peace in India influences the expansion of global connectedness of India. Global Peace Index (GPI) is provides positive value but this value is not significant. It satisfy the hypothesis number 3 but not statistically significant. Global terrorism index of India gives a result which is significant at 5% level but this result indicates that terrorism movement in India positively influences the global connectedness of India which unable to satisfy our alternative hypothesis 4 (H_4). Result of inflation rate is significant at 10% level but it does not satisfy our hypothesis 5. It implies that increment of inflation rate helps to expand the global connectedness of India during the sample period. Dependency ratio of India acts as a burden of global connectedness. Negative value of this coefficient implies enhancement of dependent individual reduces the global connectedness of India during the sample period. This variable satisfy hypothesis number 6 and this also statistically significant at 5% level. Education rate of India during the study period provides significant negative result. Global connectedness of India is negatively influenced by education rate i.e. enhancement of education rate reduces the global connectedness. It is expected that education of India may helps to enhance the self dependency. So this element unable to satisfy the alternative hypothesis number 7.

Hence, the adjusted R square is 91%, it represents the good-fitness of the regression model. Table 4 shows this result.

Table 4: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.990[a]	0.980	0.910	0.41910

ANOVA table shows the macro environmental how much accurate. Table 5 represents these results.

Table 5: ANOVA Table

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	17.265	7	2.466	14.042	0.068
Residual	0.351	2	0.176		
Total	17.616	9			

Here, the regression value is 17.265 i.e. 98% of total. Hence residual value is .351 i.e. 2 % of total. The result of this table indicates that these elements are perfectly accurate. Value of F statistics is 14.042 that is significant at 10% level.

Conclusion

Global connectedness of India is influenced by all sample macro environmental elements. This study is conducted on ten years (2006-2015) data of seven macro environmental elements by using multiple regression method. Result of this study reveals that effect of three elements satisfies the hypotheses. Out of these three corruption perception index and dependency ratio have significant effect and the effect of global peace index is not statistically significant. Another side human development index, global terrorism index, inflation rate and education rate unable to satisfy the hypotheses but effect of these all elements are significant. Hence, in India dependency ratio has been played a vital role for the as influencer of global connectedness, after that corruption perception index also play important role for creation a burden on global connectedness. It can be concluded that global connectedness will increase by reduction of corruption perception index and dependency ratio.

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ORAL PRESENTATION-20

Tide and Ebb in the Current Business Environment- With Special Reference to Conglomerate Merger

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Abstract: Growth and sustainability is the vital motto of the current business environment nowadays. So it gets rampant by the various dynamics of the global business environment. In this genre of globalization, industrialization and digitization running a business is not a child play but it is a cake walk to achieve its objectives. So as a measure of control the companies started conglomerating. Conglomerate merger is a type of merger where the businesses diversify to form an unrelated line of business under one roof. The primary objective of the study is analysis of the external environment which affects different industries but due to its conglomerate nature it could resist in the current business environment by using PESTLE and SWOT Analysis technique. The secondary objective is to study about the top three conglomerate companies operating in India according to their revenue in 2015-16 namely TATA group, Aditya Birla group and Reliance Industries Limited in comparison with other companies of same nature. However, the study bought light to the fact that conglomerate companies are adaptive to the changes easily than other companies and how one business of a company helps in compensating the loss of another business of the same company.

Keywords: Conglomerate Companies, Non- Conglomerate Companies, Market Capitalization Profit after Tax, Revenue, Sales.

Introduction

Mergers and Acquisitions among firms indicate the magnitude of economic gains. The purpose of company joining together is to secure various advantages such as economies of large scale production, avoiding competition, increasing efficiency, expansion, etc. The Institute of Chartered Accountants of India has introduced Accounting Standard-14 (AS-14) on 'Accounting for Amalgamations'. Merger means when two existing company merger to form a new company. A merger is a transaction that results in the transfer of ownership and control of a corporation. The two companies come together to become one. Two companies usually agree to merge when they feel that they can achieve something together rather than separately.

A conglomerate merger is a type of merger whereby the two companies that merge with each other are involved in different sort of businesses. The importance of the conglomerate mergers lies in the fact that they help the merging companies to be better than before. It also implies the two companies that are merging do not even have the same customer base as they are in totally different businesses. The threat of takeover might force existing managers to increase efficiency in competitive markets.

Conglomerate mergers also provide opportunities for firms to reduce capital costs and overhead and to achieve other efficiencies. Conglomerate merger has both advantage and disadvantages and the decision of conglomerate merger is completely dependent on the financials of takeover target and mindset of the management, of the acquiring company.

Methodology

Detailed analysis have been done taking into account the aggregate revenues, profit after tax, sales, market capitalization of Tata group, Aditya Birla group and Reliance Industries Limited. The companies are selected based on the revenue as on 2015-2016. The data for 10 years has been collected from 2006-2016 balance sheet and money control as samples, then tabulated and interpreted. For analyzing various ratios has been used such as profitability ratios (net profit margin and return on capital employed) and liquidity ratios (current and quick ratio). Trend analysis, correlation of coefficient, t-test, SWOT and PESTLE analysis have been used for comparative analyze of conglomerates, non-conglomerates and various unrelated line of businesses.

Results & Discussion

Tata Group having total of around fifteen unrelated line of business earns maximum amount of revenue (i.e. 114.6 billion $) and is ruler of the conglomerate companies in India and followed by Aditya Birla Group and Reliance Industries Limited (Refer Table 1) as they are having almost same amount of Revenue.

Table 1: Revenue of Top Ten Conglomerate Companies in India

Top 10 Conglomerate Companies in India	Total Revenue for year 2015-16
Tata Group	$114.6 billion
Aditiya Birla Group	$42.1 billion
Reliance Industries Limited	$41.8 billion
Essar Group	$35.9 billion
Bharti Group	$19.99 billion
Jindal Group	$18.48 billion
Larsen & Toubro	$15.28 billion
Adani Group	$11.72 billion
Mahindra Group	$11.62 billion
Reliance Anil Dhirubhai Ambani Group	$8.85 billion
	source : www.mbaskool.co

Tata group earned the maximum amount of revenue from Tata Steel Limited followed by Tata Motors and Tata Consultancy Service (TCS). TCS and Tata Motors are the highest earner of profit after payment of tax to the government. Tata group doesn't experience long gestation period of low market value because of its diversified business. Even if the market value of one sector falls other sectors compensates it and maintains stability in the growth rate of market value. The relation between sales and profit after tax is statistically significant. Tata group has strong holding in the market and has lots of opportunities to expand in future.

Aditya Birla group earns the highest revenue from Hindalco which is enough to compensate the loss suffered by other companies under it. In 2015-2016 Idea cellular was ranked high due to its profit maximization (Figure 1) and contributing the most to Aditya Birla Group. Due to its conglomerate nature the company is not affected much due to loss suffered by one or two sector as other sectors are there to compensate the loss. Market value of the outstanding shares increased at a very low rate but currently it is rapidly increasing maybe due to improved financial conditions, formulation of new strategies, etc. The relation between sales and profit after tax is dependent on each other so they are statistically significant. Even Birla group has many strength, weaknesses, opportunities and threats to sustain its business.

Reliance Industries Limited lead by Mukesh Ambani contributes higher amount of revenue due to its well diversified and profitable businesses. It profit after payment of tax is also very high as well as its market value of outstanding shares of RIL. The relation between sales and profit after tax is positively related and statistically significant.

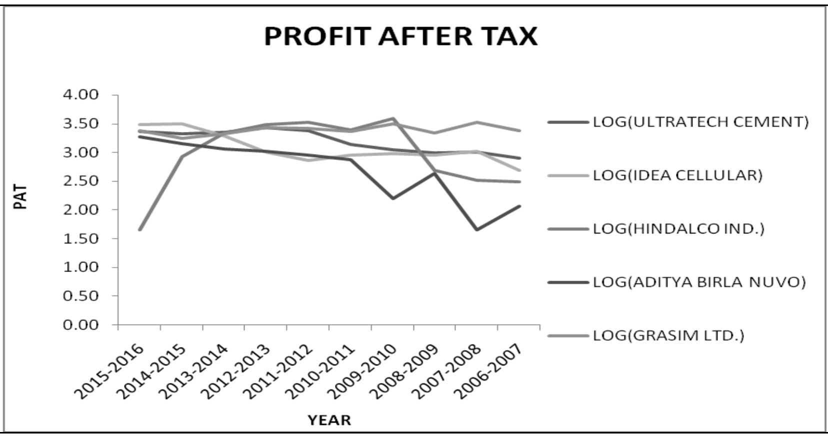

Figure 1: Profit After Tax of Aditya Birla Group of Companies

The correlation co-efficient Mahindra & Mahindra Automotives and Tata Motors Net Profit Margin and Return on Capital Employed is positive with values of 0.59 and 0.85 respectively. Both the automobile companies have a positive correlation coefficient in both types of Liquidity Ratio (Current Ratio and Quick Ratio) with values of 0.66 and 0.51 respectively.

The cumulative growth for Tata Consultancy Services is -18% whereas it is 44% for Tech Mahindra. The correlation co-efficient of the company's Net Profit Margin and Return on

Capital Employed is negative with values of -0.29 and -0.58 respectively. Both the Information Technology companies have a positive correlation coefficient in both types of Liquidity Ratio (Current Ratio and Quick Ratio).

The negative cumulative for Idea Cellular is -45.78% as compared to -87.63% for Bharti Airtel. The correlation co-efficient of the company's Net Profit Margin and Return on
Capital Employed is positive with values of 0.09 and 0.08 respectively.

Both the telecommunication companies have a positive correlation coefficient in both types of Liquidity Ratio (Current Ratio and Quick Ratio).

Table 2: Cumulative Growth Rate of Tata Group of Companies and Other Conglomerate Companies

Company	Profitability Ratio		Liquidity Ratio	
	Net Profit Margin	Return on Capital Employed	Current Ratio	Quick Ratio
Automotive Sector				
Tata Motors	0.413	-0.586	0.181	-0.282
Mahindra & Mahindra Automotive	-0.281	-0.389	-0.204	-0.2
IT Sector				
Tata Consultancy Service	0.014	-0.180	0.306	0.311
Tech Mahindra	1.870	0.442	0.361	0.354
Steel-Industry Sector				
Tata Steel	1.163	-1.269	0.540	-0.665
Jindal	1.524	1.284	0.520	0.676
# Data extracted from money control				

The negative cumulative for Tata Steel is -127% as compared to -128% Jindal Steel. The correlation co-efficient for the company's Net Profit Margin and Return on Capital

Employed is positive with values of 0.42 and 0.45 respectively. Both the telecommunication companies have a negative correlation coefficient in both types of Liquidity Ratio (Current Ratio and Quick Ratio) with values of -0.38 and -0.50 respectively.

The correlation co-efficient for the company's Net Profit Margin and Return on Capital Employed is positive with values of 0.62 and 0.19 respectively. Both the automobile companies have a negatively correlation coefficient in both types of Liquidity Ratio (Current Ratio and Quick Ratio) with values of -0.40 and -0.40 respectively.

Table 3: Level of Significance between the conglomerate and non-conglomerate companies in India

Sector	Company		T-Stat	T-Critical Two Tail	Level of Significance
	Conglomerate Company	Non-Conglomerate Company			
Automobile	Tata Motors	Maruti Suzuki	4.43	2.23	H_0 (Null) Rejected
Tele-Communication	Bharti Airtel	BSNL	2.62	2.26	H_0 (Null) Rejected
Cement	Ultratech Cement	Ambuja Cement	3.14	2.26	H_0 (Null) Rejected
Energy	Tata Power	NTPC	-5.84	2.14	H_0 (Null) Rejected
Steel	Tata Steel	SAIL	19.4	2.23	H_0 (Null) Rejected

There is significant difference statistically between the means of the revenue of Tata Motors and Maruti Suzuki during the study period from 2007-2016. The difference in mean may be due to the fact that Tata Motors is a company of Tata group while Maruti Suzuki is not a part of any conglomerate company. (Refer Table 3).

There is significant difference statistically between the means of the revenue of Bharti Airtel & BSNL during the study period from 2007-2016. The difference in mean may be due to the fact that Airtel is a part of Bharti group which is a conglomerate company. (Refer Table 3).

Hence, there is significant difference statistically between the means of the revenue of Ultra Tech Cement Ltd and Ambuja cement during the study period from 2007-2016. The difference is largely due to the fact that Ultra Tech Cement Ltd is part of the 2nd largest conglomerate in India Aditiya Birla Group whereas Ambuja Cement is not a part of any conglomerate. (Refer Table 3).

Hence, there is significant difference statistically between the means of the revenue of Tata Power & NTPC during the study period from 2007-2016. In the above case we can see that NTPC is earning huge profit though it is not a part of a conglomerate and it has no other unrelated line of businesses. On the other hand Tata Power being a part of a conglomerate is earning a lesser revenue than NTPC. (Refer Table 3).

There is significant difference statistically between the means of the revenue of Tata Steel and SAIL during the study period from 2007-2016. The huge difference in the mean between the two steel companies may be due various factors. One of the major one may be the fact that Tata group is the parent organisation of the Tata steel whereas SAIL is not a part of any such parent company. (Refer Table 3).

Pestle analysis to study and analyze the current business environment and their effect on businesses. The conglomerate companies are at the advantageous position at the present then non conglomerates due to fluctuations and up gradation of new rules and regulations in the current business environment. (Refer Table 4 for details).

Table 4: PESTLE Analysis to Analyze the Current Business Environment

Pestle Analysis	
P: Political	This includes the political system, the government policies and attitude towards the business community and unionism • Change of Government from Congress to BJP • Ban on import and export to china
E: Economical	Business obtains all its needed inputs from the economic environment and it absorbs the output of business units • Demonetization • Globalization
S: Social	The social structure and the values the society cherishes have a considerable influence on the functioning of business firms • TATA NANO • JIO Reliance
T: Technological	To survive and grow in the market, a business has to adopt the technological changes from time to time • Digitization – Digital India • E-Commerce
L: Legal	Every business organization has to obey and work within the framework of the law. • Union budget, 2017 • Companies Act, 2013
E: Environmental	The natural environment includes geographical and ecological factors that influence the business operations • Go Green • Environment Protection Act

Conclusion

The current business scenario is rough and rigid, there are lots of hurdles and hardship so to cooperate with this the businesses has to choose different alternative businesses to be in this corporate world and fight back the challenges. The detailed study and analysis of top conglomerates who are the show stoppers of the corporate world and studying their various aspects through various statistical tools I would like to suggest that according to me conglomerate companies are in better positions due to its large number of unrelated line of business so other companies should also think about diversifying their business to increase the market share and its profitability. The main reason for the steady growth is that they already have a brand name and people know a day go by brand. Due to these sudden events different industries experienced lots of hardships but due to diversification of the conglomerate company's one sector compensated the loss of another sector but this lacked in the case of non-conglomerates. SWOT analysis has been done to analyse what are the strengths, weaknesses, future opportunities and threats of the top conglomerate company in India. We can conclude that conglomerate companies play a vital role in the current business environment by accepting the varied challenges and fighting back to overcome it.

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ORAL PRESENTATION-21

Start-Up India: Unleashing the Power of Youth

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Abstract: Entrepreneurship among youth is fundamental to make the growth inclusive. It eradicates economic stagnation and development gap, bringing innovations, new jobs and dynamism into the business environment. In this context, the Start-up India Action Plan, unveiled by the honourable Prime Minister, Shri Narendra Modi, on 16th January 2016, has kindled the spirit of adventure amongst the country's youth, with stronger eco-system to support their creativity and growth at multiple levels. The budding entrepreneurs can now go ahead with their dream ventures, taking advantages of easy registrations, liberal finance, tax exemptions, stronger incubation network and a faster exit mechanism. A remarkable growth of 25% had been witnessed in 2016 with 350+ start-ups founded by young student entrepreneurs in the country. By 2020, a projected 11,500 tech-start-ups are going to emerge, employing over 2, 10,000 people. Pepper Tap, Zivame, Commonfloor, Car Dekh and others are some of the successful leading Start-ups in India. Secondary research data has been extensively used to study how this maturing ecosystem is unleashing the power of youth and making India to gain supremacy in the entrepreneurial coliseum. It is an attempt to understand the role of various support systems in accelerating domestic entrepreneurial dynamics along with economic development.

Keywords: Ecosystem, Entrepreneurial Coliseum, Inclusive, Innovations, Supremacy

Introduction

"I see startups, technology and innovation as exciting and effective instruments for India's transformation." - Shri Narendra Modi, Prime Minister of India.

Start-up India is a revolutionary action plan intended to promote bank financing for start-up ventures to increase entrepreneurship and encourage start-ups with jobs creation .It aims to leverage a *strong eco-system for nurturing innovation and* entrepreneurship through modernisation and design. It is a master weapon to combat multiple national issues as unemployment, poverty, escalation of social status along with filling the gap in the economy and its development. It is focused on to restrict role of States in policy domain and to get rid of 'License Raj' and hindrances like land permissions, foreign investment proposal, red-tapism and environmental clearances, sapping the energy and spirit of young entrepreneurs in the country. The features which drew applauses include self-certification-based compliance system, no inspections for three years, cheaper patents, offer of public procurement, Start-up Fests and special schemes for women. What makes this initiative additionally special is the fact that start-ups hold the potential of creating more jobs for an estimated 15 million people who join workforce every year at a time when the conventional manufacturing sector is facing a slump. It is expected that the success of this scheme will quicken spreading of the start-up movement, eventually making India, a better economy and a stronger nation.

Definition of a start-up:

"Start-up means an entity, incorporated or registered in India not prior to five years, with annual turnover not exceeding INR 25 crore in any preceding financial year, working towards innovation, development, deployment or commercialisation of new products, processes or services driven by technology or intellectual property.

Provided that such entity is not formed by splitting up, or reconstruction, or a business already in existence.

Provided also that an entity shall cease to be a Start-up if its turnover for the previous financial year have exceeded INR 25crore or it has completed 5 years from the date of incorporation/registration. Provided further that a Start-up shall be eligible for tax benefits only after it has obtained certification from the Inter-Ministerial Board, setup for such purposes." - Action Plan

Key Points:

1. Any such entity formed by splitting up or reconstruction of a business already in existence shall not be considered a 'start-up'.
2. In order to obtain tax benefits a start-up so identified under the above definition shall be required to obtain a certificate of an eligible business from the Inter-Ministerial Board of Certification.
3. An entity shall cease to be a start-up on completion of five years from the date of its incorporation/registration or if its turnover for any previous year exceeds Rupees 25 crore. *As per modified guidelines under 'Start-up India and Stand –up India' it is seven years old. However, in case of Start-up in biotechnology sector, the period shall be extended to ten years.*
4. Entity means a private limited company (as defined in the Companies Act, 2013), or a registered partnership firm (registered under section 59 of the Partnership Act, 1932) or a limited liability partnership (under the Limited Liability Partnership Act, 2002).

Smallbone and Welter (2001) Entrepreneurs contribute to economic development in terms of job creation, innovation and external income generation depending upon priorities and different stage of market reform. The authors suggested direct support to SMEs to overcome immediate difficulties to strengthen their potential for development and growth.

In the study conducted by Deepti Maheshwari and Supriya Sahu (2013), it has come forward that the awareness towards the path of entrepreneurship is now picking up a quick pace in our own country, and as a matter of fact is seen as one of the countries that is par excellence with the rest of the Asian countries as far as growing entrepreneurship is concerned. There are ample opportunities in small businesses in India and such opportunities will transform India in the coming future.

T. Swetha and K. Venugopal Rao (2013) have elucidated the history of entrepreneurship in India. In their paper they have taken us through the journey of some famous and successful entrepreneurs. According to them, Indian entrepreneurs are more about overcoming barriers, obstacles, inspiring & surmount in their fields.

N. Santhi and S. Rajesh Kumar (2011) explains that a country's economic policy environment must be favourable for organisations to achieve efficiencies in today's global market. According to them study of entrepreneurship is relevant because it helps entrepreneurs better fulfil their personal needs but because of the economic contribution of the new ventures. More than increasing national income by creating new jobs, entrepreneurship acts as a positive force in economic growth by serving as the bridge between innovation and market place.

Naude (2008) Entrepreneurship has important role to play in fostering from a predominantly traditional/agrarian economy to modern economy. With innovation driven growth productivity is increased in advanced countries. Self-employment, Startup and credit market determines quantity and quality of entrepreneurship. They found that low entrepreneurial activity contribute to economic stagnation and even developmental gap.

Methodology

Research and experimental development is work undertaken systematically to increase the stock of knowledge. The present study is based on the secondary data which has been collected primarily from journals, articles, online database, newspapers, magazines, books, research papers and other sources. The study is based on following objectives:

1. To explore the idea of start-ups in India.

2. To comprehend the knowledge regarding the key points that major action plan aims at reviving Indian start –ups ecosystem.
3. To study how far the budding entrepreneurs will be benefitted from Start-up India mission.
4. To enrich knowledge about some of successful leading Start-ups in India & Ola Cabs in particular.
5. To ascertain the recent growth of start-ups in India.

Results & Discussion

Start-up India Action plan: Key Highlights

1. Income Tax Exemption for the first 3 years on the profits made by the Start-up companies.
2. Exemption on Capital Gains taxes (The 20% tax will be exempted on the capital gains made by the Govt. approved Venture Capitalists).
3. Fast track examination of Patent & Intellectual Property Rights applications filed by the Start-up companies.
4. The Start-up companies will have the option to self-certify themselves through 'Start-up India Mobile App' with respect to most of the rules related to 'Labour & Environment Laws'. To set up industry wise 'Start-up incubators' across the country.
5. New and special schemes targeting women entrepreneurs to be launched.
6. In case of failure *(bankrupt)* of a Start-up enterprise, the government aims at providing speedy winding up procedures.
7. Single-point contact centre will be established for all the works & issues related to Start-up companies. Innovation hub under Atal Innovation Mission will be created.
8. Registration of a Start-up company can be done in a single day through Start-up India Mobile app / portal from April 2016.
9. An all-India hub is to be created as a single contact point for Start-up foundations in India, which will help the entrepreneurs to exchange knowledge and access financial aid.
10. A fast-track system for patent examination at lower costs is being conceptualised by the central government. The system will promote awareness and adoption of the Intellectual Property Rights (IPRs) by the Start-up foundations.
11. The government will develop a fund with an initial corpus of Rs 2,500 crore and a total corpus of Rs 10,000 crore over four years, to support upcoming start-up enterprises.
12. A National Credit Guarantee Trust Company (NCGTC) is being conceptualized with a budget of Rs 500 crore per year for the next four years to support the flow of funds to Start-ups.
13. The government plans to set up seven new research parks, including six in the Indian Institute of Technology campuses and one in the Indian Institute of Science campus, with an investment of Rs 100 crore each.
14. The government is to further establish five new biotech clusters, 50 new bio incubators, 150 technology transfer offices and 20 bio-connect offices in the country.
15. The government will introduce innovation-related programmes for students in over 5 lakh schools.
16. A rebate amount of 80 percent of the total value to be provided to the entrepreneurs on filing patent applications.
17. Norms of public procurement and rules of trading have been simplified for the Start-ups.

Role of Start-up India Mission in Reviving Start-Ups Ecosystem

The initiative holds high importance as these start-ups are the next job creating industry in the country. Presently, the manufacturing sector is witnessing a slump and it will continue for longer period due to current global economic condition and slowdown in China. Moreover, the increasing automation has further reduced the potentiality of manufacturing sector to create additional jobs. Thus, the government's idea of targeting start-ups as drivers of Indian economy has come at a right time.

The government is creating an ecosystem for supporting budding entrepreneurs through a formal network of incubators, accelerators and mentors that would help set up, grow and stabilize new businesses, with an emphasis on social enterprises and commercial adaptation of grass-root level innovations. The easing of certification and compliance procedure, aided by technological interventions will definitely boost investor confidence and improve the credit-off take in the economy.

Start-up India initiative intends to add a new dimension to the Indian entrepreneurship and help new comers in setting up their businesses as well as make a live network of start-ups through connection. The main aim of this scheme is to promote bank financing as well as offer incentives for start-up ventures, helping youths of the country to generate new jobs. Youths are the energetic and highly skilled section of the society so they are better target for this campaign.

The tax relaxations are bound have a huge positive impact, especially on the young entrepreneurs. Earlier, for start-up founders, many of whom were starting out their first ventures, the complex tax system was a great cause of worry and used to exhaust much of their time and resources. With the government announcing that, for 3 years, start-ups do not have to pay any taxes on profits and capital gains will certainly motivate the entrepreneurs to divert all their energies to innovation and business expansion. Labour law compliance was another matter consuming a big chunk of the productive hours of start-ups. With the concept of inspection done away for 3 years, except written complaints, the process of hiring and maintaining resources will be smoother. The dispensation from labour laws will definitely reduce the regulatory burden on start-ups so that they focus solely on vital business aspects.

Table 1: Successful Leading Start-ups in India

Sl. No.	Start-Ups	Year of Operation	Founders	Key Investors	Funding Amount	Industry
1.	Pepper Tap - Online Grocery Retailer	2014	Navneet Singh	Sequoia Capital,SAIF Partners,and Innoven capital	US$46 million	Groceries, E-commerce
2.	Zivame - Online Retailer of Lingerie	2011	Richa Kar	Kalaari Capital,IDG Ventures,and Unilazer Ventures.	US$46 million	E-commerce
3.	Common floor-A Real Estate Classifieds Portal	2007	Sumit Jain	Tiger Global, Google Capital and Accel Partners.	US$62.9 million	Real Estate
4.	Car Dekh - Online Classified Portal For Automobiles	2008	Amit Jain	Hillhouse Capital, Tybourne Capital, Ratan Tata, and HDFC Bank.	US$75 million	Classified, E-commerce
5.	Urban Ladder - Online Store Selling Furniture	2012	Anhish Goel	Sequoia Capital, Steadview, SAIF Partners and Kalaari Capital.	US$77 million	E-commerce
6.	Policy Bazaar - Online Insurance Comparison and Sales Portal	2008	Yashish Dahiya	Tiger Global, Steadview, Ribbit, Temasek and InfoEdge	US$78.3 million	Fintech
7.	Fresh Desk - Cloud-Based Customer Support Platform	2010	Girish Mathrubootham	Tiger Global, Google Capital, and Accel Partners	US$94 million	Enterprise Solutions, Cloud
8.	Big Basket -	2009	Abhinay	Bessemer Venture	US$95	Groceries,

	Online Grocer in India		Choudhari	Partners, Helion Venture Partners and Zodius Capital	million	E-commerce
9.	Just Dial - India's Largest Local Business Search Engine	1996	VSS Mani	SAIF Partners, Tiger Global, SAP Ventures, Public Shareholders.	US$103 .2 million	Search
10.	Ola - Online Taxi & Car Aggregator In India	Dec 2010	Bhavish Aggarwal & Ankit Bhati	Softbank, Didi Kuaidi, Tiger Global, DST Global, Matrix Partners and Sequoia Capital	US$1.1 7 billion	Transporta tion, Logistics
Source: Tech in Asia Database						

Table 2: Ola at a Glance

Ola is the collective prodigy of Bhavish Aggarwal & Ankit Bhati and was officially owned by ANI Technologies Pvt.Ltd.	India's third most valued start-up after Flip kart and Snap deal.	Softbank, Didi Kuaidi, Tiger Global, DST Global, Matrix Partners and Sequoia Capital are some of the key investors of Ola	Ola will be the second company in India to explore electric taxis after Bengaluru-based Lithium, which introduced such cars in May with a fleet of 100 cars.
Most well-funded tech start-ups in India. Raised $104 million (Rs 670 crore) from Falcon Edge and Tata's RNT Capital advisers. The amounts are Rs 402 crore and 267.9 crore respectively.	Presently operational in 102 Indian cities & claimed a growth rate of 30 times in 2015. Ola is planning to enter Sri Lanka, Nepal and Bangladesh market as a part of an international expansion plan.	A fleet of 350,000+ vehicles	Over 25 million customers, as of October 2015. Reported a turnover of Rs 380 crore for 2014-2015
Ola acquired TaxiForSure on 1st March 2015 for about $200 million, predomintaly through convertible preference shares.	Started a new leasing subsidiary Ola Fleet Technologies Pvt. and committed an initial investment of Rs 500 crore.	Ola has become the market leaders in the cab service space, ahead of Meru and Uber	It has been honoured with Forbes India Leadership Award: Outstanding Start-up & Consumer Internet Company at VC Circle Annual Awards 2015.

Start- ups Growth in India

According to NASSCOM-Zinnov start-up report titled "Indian Start-up Ecosystem Maturing – 2016**"** India continues to harbor the third largest start-up ecosystem globally with 4750+ total tech start-up in 2016, marginally behind the USA and the UK, driven by an extremely young, diverse and inclusive entrepreneurial landscape. The report further states that the ecosystem is poised to grow by an impressive 2.2X to reach more than 10,500 start-ups by the year 2020, employing over 210,000 people. The indirect potential for employment is even higher.

Table 3: List of Start-ups (Country wise)

Sl. No.	Name of the Countries	Technology Driven Product Start-ups
1	United states	52000-53000
2	United Kingdom	4900-5200
3	India	4700-4900
4	Israel	4500-4600
5	China	4200-4300
Source: NASSCOM Start-up Ecosystem Report-2016		

According to the report by ASSOCHAM in association with Thought Arbitrage Research Institute, India has again figured among the five largest hosts in the world, along with China (10,000 each) in terms of total number of start-ups, comprising both tech and non-tech areas. The US occupies the top slot with 83,000 start-ups.

Table 4: Indian Start-Up Industry Composition

Sl. No	Technology based Start-ups (Sector)- 4300	Composition	Non-Technology based Start-ups (Sector) - 5700	Composition
1	E-Commerce	33%	Engineering	17%
2	B2B	24%	Construction	13%
3	Consumer Internet	12%	Agri-products	11%
4	Mobile Apps	10%	Textiles	08%
5	SaaS	8%	Printing and Packaging	08%
6	Others	13%	Transport and Logistics	06%
7	--	--	Outsourcing and Support	05%
8	--	--	Others	32%
Source: NASSCOM Start-up India Report 2015				

Unbound by the fear of failure or downturns, a new breed of ‘young’ entrepreneurs is unleashing an incredible wave of start-up movement in the country. A remarkable growth of 25% had been witnessed in 2016 with 350+ start-ups founded by young student entrepreneurs in the country. One in every ten entrepreneurs is a woman.

According to NASSCOM Start up Ecosystem Report-2015, active investors in India have increased from 220 in 2014 to 490 in 2015, depicting a 2.3X growth. Further, 8 out of every 10 top VC/PE Firms in India are foreign, and global investment in the Indian ecosystem is leading to an increased FDI.As of December 2015, eight Indian start-ups –Flipkart, Snapdeal, Ola, InMobi, Paytm, Quikr, Zomato and MuSigma-form part of ‘Unicorn’ Club.

According to the InnoVen Capital: Indian Angel Report 2016 , angel investment in India in FY16 stood at Rs.113.6 crore across 69 deals, a rise of about 62% in deal value and 47% in deal volume in the previous FY15 with Rs.70 crore investments across 47 deals. Table 5: Indian Start-up Ecosystem

Sl. No.	Parameters	Value
1	Total No of Start-ups Incorporated	4600-5000
2	No of VCs Firms	300^{+}
3	No of Angel Investors	1800
4	No of Incubators	140^{+}
5	No of Unicorns	09
Source: NASSCOM Start-up Ecosystem Report-2016		

Table 6: Start-Up Geographical Clusters in India

Sl. No.	Cities	No. of Start-Ups	Remarks
1	Bengaluru	1300^{+}	Silicon Valley of India
2	Delhi-NCR	1175^{+}	Ecommerce Hub
3	Mumbai	800^{+}	Emerging Fin- Tech
4	Hyderabad	400^{+}	Infotech Advantage - Cyberabad
5	Pune	300^{+}	Emerging Health - Tech Hub
6	Chennai	275^{+}	B2B Dominance
7	Kochi	110^{+}	Early Stage Hub
8	Kolkata	75^{+}	Early Stage Hub
9	Jaipur	50^{+}	Early Stage Hub
Source: NASSCOM Start-up Ecosystem Report-2016			

Table 7: Fastest Indian Start-up to become a Unicorn

Sl. No.	Start-ups	Time Taken in Years
1	Zomato	7
2	Snapdeal	7
3	Flipkart	5
4	Shopclues	4.5
5	Ola	4
6	Hike	3.7
Source: NASSCOM Start-up Ecosystem Report-2016		

Table 8: Quick Snapshot of other Verticals

Sl. No.	Focus Area	Total Start-ups	Incorporated in 2016	Funding (in USD Mn)
1	Media Tech	150-200	75-90	40-60
2	Core Technologies	700-800	150-200	240-270
3	SCM Logistics	150-170	15-25	100-150
4	Food Tech	300-400	50-60	600-700
5	Manufacturing	110-140	15-25	15-25
Source: NASSCOM Start-up Ecosystem Report-2016				

Table 9: Top Revenue Earning Companies for the Fiscal Year 2015-2016

Top Revenue-Earning B2C Companies				Top Revenue-Earning B2B Companies			
Name	Founded in	Total Funding (in $)	Revenue (in Rs Crore)	Name	Founde d in	Total Funding (in $)	Reve nue (in Rs Crore
FlipKart India	2007	7.0b	13,177	InMobi	2006	220.6m	1922
FlipKart Internet			1,952	Delhivery	2011	257.7m	524
Myntra	2007	158.8m	1069	EcomExpress	2012	149.9m	359
Jabong	2012	47.5m	1160	Power2SME	2012	34.8m	310
Snapdeal	2010	1.6b	1,457	Exotel	2011	705.9K	28
Ola (Consolidated)	2010	1.7b	758	--	--	--	--
Bigbasket	2011	291.8m	579	--	--	--	--
Bookmyshow	1999	124.5m	248	--	--	--	--

Shopclues	2011	631.2m	178	--	--	--	--
Zomato	2008	243.8m	185	--	--	--	--
Byju’s	2008	204.0m	110	--	--	--	--
LensKart	2010	129.5m	100	--	--	--	--
Freecharge	2010	177.7m	36	--	--	--	--
Paytm	2010	2.0b	920	--	--	--	--
Source: The Times of India 15.08.17 Pg-12							

Conclusion

To sum up, Start-up India manifests government’s strong determination to accelerate sustainable economic growth onto a faster trajectory to make up for the lost opportunities of the previous decades, empowering the youths to generate output and employment for themselves. With a comprehensive set of structural and regulatory reforms, it offers ample of opportunities to youthful nation to realize its potential of creativity and innovation. It aims at boosting entrepreneurship and economic development with proactive support at multiple levels and as a result of those we are witnessing a sincere rise in the number of enterprises in the Country, revolutionizing Indian economy with supremacy in the entrepreneurial coliseum. It is expected that the success of this scheme will quicken spreading of the start-up movement, with cascading effect on economic, financial and foreign investment development in the country. This is positively a good beginning for bright future of India.

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ORAL PRESENTATION-22

A Study on Growth & Opportunities of E-Banking in India

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Abstract: It is a very well known fact that in today's wave of globalization, banking has become very vital for a healthy economy. The banking industry has been consolidating at a rapid pace. There has been a major change in the way the banks are functioning in the last ten years. The central goal of most managers is to reduce the operational cost & increase profitability. On the other hand, customer requirements have changed substantially in the last decade. They are more careful about their personal finances. They are increasingly becoming computer literate & are able to interact more fluently with their online financial service providers. Therefore this online banking system is facing a lot of challenges with their induced changing way of functioning in order to keep pace with the changing needs of their customers. Therefore, E-Banking is likely to bring a host opportunities as well as unprecedented risks to the fundamental nature of Banking in India. The main concern has become whether management has the creativity & vision to harness the technology & provide customers with new financial products necessary to satisfy their continually changing financial needs. At the same time the future of e-banking seems to be the driving force behind a large number of innovations & contribute to the growth of the banking industry through employment creation, investment etc. Banks must deliver high quality products at the customers' convenience with high-tech, high-touch personal & affordable services. In order to achieve this, management has to balance the five key values that increasingly drive customer's banking decisions: simplicity, customised service, convenience, quality & price. Online banking will realize its full potential when the following key value fall into place: differentiating products & service, managing financial supply chains, pricing issues in banking, attracting & retaining customers & back-office support for e-banking. But the challenge for banking industry lies in creating right atmosphere & providing right incentives for consumers to use personal computers regularly for banking & in making sure that they provide attractive & affordable services.

Keywords: E-Banking, Customized Service, Financial Supply Chains, High-Touch Personal Service, High-Touch Affordable Service.

Introduction

Banking is vital to a healthy economy. The banking industry has been consolidating at a rapid pace. Banking as a business can be sub-divided into five broad types: retail, domestic wholesale, international wholesale, investment & trust. Of these retail & investment banking are most affected by online technological innovations & are the ones that stand to profit most from electronic commerce. Online banking system is facing a lot of challenges with their induced changing way of functioning in order to keep pace with the changing needs of their customers. Increased competition, changing business environments, globalization and the advancement of Information and Communications Technology are the important factors that have forced Banking and Financial services to change. Therefore, with the change in demand of the customers & passing of the traditional banking sector to electronic banking, new strategies have become necessary in order to provide differentiating products & service, managing financial supply chains, settling pricing issues in banking, attracting & retaining customers & keeping back-office support for e-banking. But the challenge for banking industry lies in creating right atmosphere & providing right incentives for consumers to use personal computers regularly for banking & in making sure that they provide attractive & affordable services. In order to achieve this, management has to balance the five key values that increasingly drive customer's banking decisions: simplicity, customised service, convenience, quality & price.

Rupa Rege Nitsure (2003) in the article titled, "E-banking: Challenges & Opportunities" confirms that E-banking has the potential to transform the banking business as it significantly lowers transaction and delivery costs. She has discussed some of the problems developing countries, which have a low penetration of information and telecommunication technology, face in realizing the advantages of e-banking initiatives.

N. Jamaluddin (2013) in the article titled, "E-banking: Challenges & Opportunities in India" opined that India is still in the early stages of E Banking growth and development. Competition and changes in technology and lifestyle in the last 10 years have changed the face of Banking. The changes that have taken place impose on banks tough standards of competition and compliance.

Shamsul Haq, Bilal Mustafa Khan (2013) in their article titled, "E-banking Challenges & Opportunities in the Indian Banking Sector" has discussed the objections which the banks are facing and found the impact population vital statistics like Education, age, occupation and income are influencing the adoption of cyber banking in India.

Karamjit Kaur and Rajneesh (2014) in their article, "Electronic Banking in India: Innovations, Challenges and Opportunities", has highlighted the need and benefits of E-banking & also revealed the current status of financial innovations in Indian Banking sector. It also focused the challenges faced in E-banking and the opportunities available with the banks in E-banking.

Jayshree and Chavan (2013) in her article, "Internet Banking- Benefits and Challenges in an Emerging Economy", confirms that new information technology has taken important place in the future development of financial services, especially banking sector transition are affected more than any other financial provider groups. She has mentioned that online banking has a lot of benefits which add value to customers' satisfaction in terms of better quality of service offerings and at the same time enable the banks gain more competitive advantage over other competitors.

Objective of the Study

1. To understand the present scenario of E-Banking in India
2. To get the full acquaintance of the E-Banking facilities and its benefits.
3. To identify the challenges for E-banking.
4. To analyze their growth & performance in Indian context
5. To know their underlying opportunities.

Methodology

This study is based on secondary data. Data has been collected from books, websites, journals, newspaper and magazines. Data were collected to understand the present scenario, growth & performance of E-banking in India & to analyze their opportunities & challenges in Indian context.

E-Banking: Conceptual Framework

E-banking is an electronic payment system that enables customers of a financial institution to conduct financial transactions on a website operated by the institution, such as retail bank, virtual bank, credit union or building society. E-banking is also referred to as internet banking, online banking, and virtual banking and by other terms.
Difference between Physical Banking & E-Banking

Physical banking has been the usual way that customers make use of banking transaction and financial services company. Physical banking involves physical branches that are located around the most populated areas to serve their clients and allow people to compete their transactions & services in person (Sulaiman, C.H, & Wee, 2005).

E-banking, which does not involve any physical action i.e., going to bank, standing in a queue, and face to face communication, exists in the form of ATMs, phone banking, home banking & Internet Banking. An e-bank is a non-branch bank (Kemal, 2001) that involves the provision of fully automated banking services. Online shopping has become available & more convenient and secure because of the appearance of online banking (Poole, Lambert, Woodford & Moschovitis, 2005)

E-Banking in India: An Appraisal

In India, though E-banking is in a nascent stage, no doubt Indian banks are making sincere efforts for the adoption of advanced technology and installation of e-delivery channels but still masses are vary of the concept. Banks are making sincere efforts to popularize the e-banking services and products. Younger generation is beginning to see the convenience and benefits of e-banking. In years to come, e-banking will not only be acceptable mode of banking but will be the preferred mode of banking. Reserve Bank of India has taken the initiative for facilitating real time funds transfer through the Real Time Gross Settlement (RTGS) System. Under the RTGS system, transmission, processing and settlements of the instructions will be done on a continuous basis. Gross settlement in a real time mode eliminates credit and liquidity risks. Any member of the system will be able to access it through only one specified gateway in order to ensure rigorous access control measures at the user level. Again, with the process of dematerialization of shares having gained considerable ground in recent years, banks have assumed the role of depository participants. In addition to customers' deposit accounts, they also maintain demat accounts of their clients. Online trading in equities is being allowed by SEBI. This is another area which banks are keen to get into.

Types of E-Banking

There are various types of e-banking like ATM, Telephone Banking, Home Banking, Internet Banking etc.

- *ATM (ATM (Automatic Teller Machine)*: Automated teller machines work 24 hours a day, and are located in many different places, especially in the most populated places, which makes them easy to find. Using an ATM requires an ATM card and a personal PIN allowing customers secure 24 hour access to banking services such as deposits, withdrawals, transfers, inquiries about account balances, requests for cheque books, account statements, direct deposits, etc (FTC FACTS For Consumers, 2009).
- *Telephone Banking*: Telephone banking allows customers to conduct banking services using the phone from anywhere and anytime, but its only disadvantage is that it doesn't involve vision for the customers while producing their transactions. Customers can have knowledge of their balances and listen to the transaction. The phone banking services can be divided to two types- Operator attended & Automated
- *Home Banking*: Home banking allows customers to complete some specific financial services directly from home. It is secure but it is limited to a variety of services that the bank and customer agree on. After 1985, this service was not as popular and was not widespread or used by many banks because it required proprietary systems and huge technology investments, which only a few banks could manage.
- *Internet Banking*: Internet banking is conducted by completing bank transactions by directly accessing the bank through the Internet. Nowadays, Internet banking customers can access many different services online, which makes physical banks open even after office hours. In means of offline banking is becoming to be online banking while physical banks are not opened (out of office hours), so customers do not need to go to the banks or call them any more unless there is an issue that cannot be handled online. Internet banking can be conducted either by accessing the Internet with a computer or by using a phone that has Internet features.

- The other products & services offered by e-banking are- Mobile Banking, Electronic sClearing Services, Electronic Clearing Cards, Smart Cards, Door Step Banking and Electronic Fund Transfer etc.

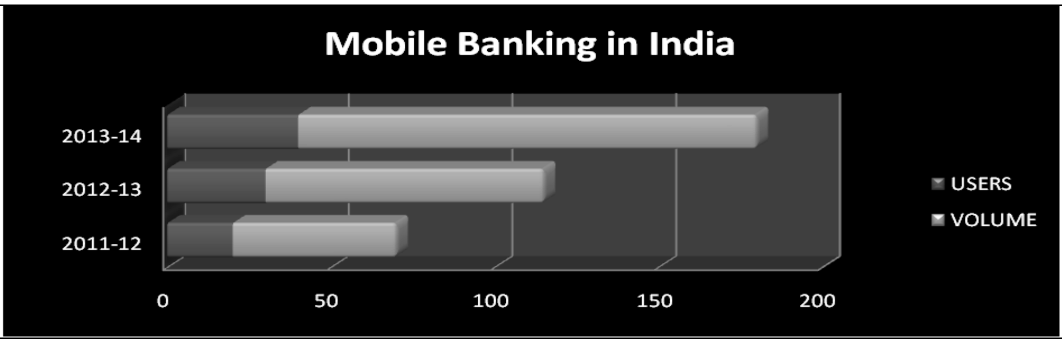


Figure 1: Mobile Banking in India

Management Issues in E-Banking

The challenge facing the banking industry is whether management has the creativity and vision to harness the technology and provide customers with new financial products necessary to satisfy their continually changing financial needs. Banks must deliver high quality products at the customers' convenience with high-tech, high-touch personal & affordable services. In order to achieve this, management has to balance the five key values that increasingly drive customer's banking decisions: simplicity, customized service, convenience, quality & price.

Online banking will realize its full potential when the following key elements fall into place:

- The development of an interesting portfolio of products & services that are attractive to customers & sufficiently differentiated from competitors
- The emergence of low cost interactive access terminals for the home as well as affordable interactive home information services.
- The identification of new market segments with untapped needs such as the willingness to pay for the convenience of remote banking
- The establishment of good customer service on the part of the banks. Since the technology increases the ease to shift from one bank to other, the banks which do not provide superior banking services will experience low levels of loyalty.
- Development of effective back office system that can support sophisticated retail interfaces.

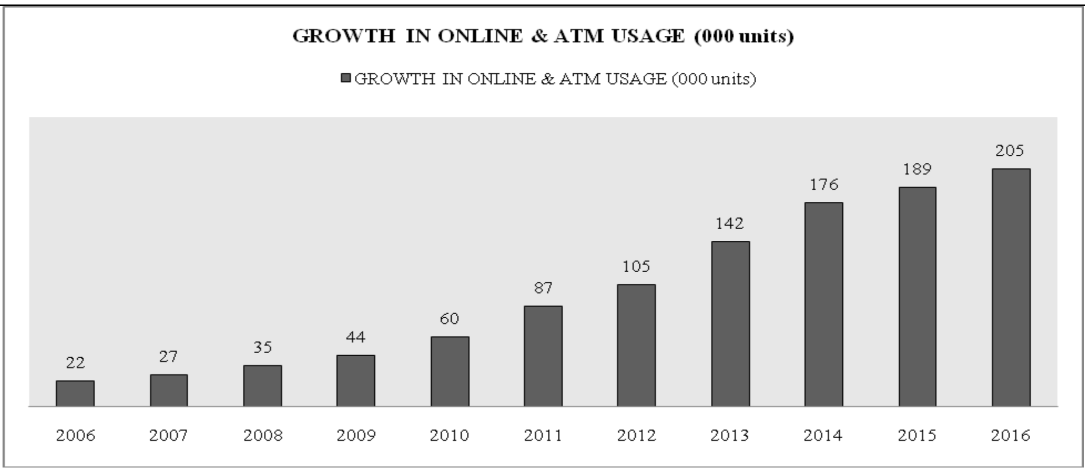
However banks that attempt to master all the above elements before offering online banking services may be least likely to reap the rewards. Since e-banking is initially attractive to a particular segment of the population, therefore, the above key elements will be distinguishing the winners from losers in the competitive e-banking industry.

Growth and Performance of E-Banking in India

Banks today operate in a highly globalized, liberalized, privatized and a competitive environment. In order to survive in this environment banks have to use IT. Indian banking industry has witnessed a tremendous developments due to sweeping changes that are taking place in the information technology. Electronic banking has emerged from such an innovative development. The progress in e-banking in Indian banking industry is measured through various parameters such as global growth trends, Automated Teller Machines, Transactions through Retail Electronic Payment Methods etc. Statistical and mathematical tools such as simple growth rate, percentages and averages etc are used.

To cope with the pressure of growing competition, Indian commercial banks have adopted several initiatives and e-banking is one of them. The competition has been especially tough for the public sector banks, as the newly established private sector and foreign banks 18 leaders in the adoption of e-banking. Indian banks offer to their customers following e-banking products and services:

Automated Teller Machines (ATMs), Internet Banking, Mobile Banking, Phone Banking, Tele banking, Electronic Clearing Services, Electronic Clearing Cards, Smart Cards, Door Step Banking, Electronic Fund Transfer.



Source: IBA statistics, Reserve Bank of India (RBI), TechSci Research (Data till October 2016)

Figure 2: Growth in Online & ATM Usage

The wide scope and ease of online banking has led to a paradigm shift from traditional branch banking to net banking where around 44 per cent people are using Net banking, which remains the most favourite mode of payment among internet users in India.

Extensions for facilities such as fund transfer, account maintenance and bill payment at ATM stations have reduced branch banking footfall.

The increase in number of ATMs would lead to increase in the number of ATMs per million populations from 205thousand units1 in 2016 to about 300 thousand units by 2017
Post the announcement of demonetization drive by the Central Government on 8th November 2016, banks all over the country witnessed surge in card usage, especially debit cards, for purchasing and making payments.

From the above table we can see that there is a positive and upward trend in the growth online & ATM Usage.

Table 1: Global Growth Trends (in Percentage)

Year	World	Advanced Economies	Developing Economies
2006	3%	5%	8%
2007	3%	5%	9%
2008	0%	2%	6%
2009	-4%	-1%	4%
2010	3%	4%	7%
2011	2%	3%	5%
2012	1%	2%	4%

Growth of Onsite and Offsite ATM in Banking Sector Number of ATMs in India is growing day by day. There is a tremendous growth in the ATM after the adoption of electronic banking by public and private sector banks. To study the growth of ATMs, it has been divided in to five categories, i.e., nationalized banks, SBI group, Old private sector banks, new private sector banks and foreign banks. It has been further classified in to onsite ATMs and offsite ATMs & we see a positive growth in all respect.

Table 2: Growth & Composition of ATMs

Year	Share of Public Sector Banks in Total ATMs		Share of Private Sector Banks in Total ATMs		Share of Foreign Banks in total ATMs	
	Percentage Share	Percentage Growth	Percentage Share	Percentage Growth	Percentage Share	Percentage Growth
2010-11	67	29	31	14	2	1
2011-12	60	26	38	16	1.5	0.5
2012-13	60	26	38	16	1	0.25

Percentage Share of Off-Site & On-Site ATMs

Year	Off-site ATMs	On-site ATMs
2011	40	60
2012	50	50
2013	52	48

Table 3: ATMs of Scheduled Commercial Banks (as at March 2013)

S.N	Bank Group	On-site ATMs	Off-site ATMs	Total No. of ATMs
I	Public Sector Banks	40,241	29,411	69,652
	Nationalized Banks (excluding IDBI Bank Ltd)	20,658	14,701	35,359
	SBI Group	18,708	13,883	32,591
II	Private Sector Banks	15,236	27,865	43,101
	Old Private Sector Banks	4,054	3,512	7,566
	New Private Sector Banks	11,182	24,353	35,535
III	Foreign Banks	283	978	1,261
IV	All SCBs (I+II+III)	55,760	58,254	1,14,014

Source: Compiled from Bank wise ATM/POS/Card Statistics, Reserve Bank of India and Report on Trends and Progress of Banking in Indi2010-11 and RBI Website.

*Data as on April 2010 except from data of POS which is as on April 2011 due to availability.

Table 4: Distribution of ATMs by Centres

Year	Rural	Semi-urban	Urban	Metropolitan
2010	8%	24%	33%	35%
2013	10%	24%	31%	34%

Table 5: Various Internet/Electronic Banking Delivery Channels

Type of Internet/Electronic Channels	No. of Channels		Growth in %
	Year		
	2010*	2010*	
No of ATM Deployed (in Actual Figure)	60,153	1,76,410	193.27
No of POS Deployed (in Actual Figure)	5,95,958	10,58,642	77.64
No of Credit Cards Issued (in Millions)	18.33	20.36	11.07
No of Debit Cards Issued (in Millions)	181.97	500.08	174.81

Table 6: NEFT and RTGS Transactions

Transaction Type	No. of Transactions (in millions) Year*		Growth in %
	2010-11	2014-15	
NEFT	132	927.55	602.69
RTGS	49	92.75	89.29

Source: Compiled from Bank wise Volumes in ECS

*As on July 1 of every year.

Table 7: Internet Users in India

	Years*				
	2010	2011	2012	2013	2014
Internet Users	9,04,21,849	12,29,70,441	15,55,75,944	21,33,39,324	24,31,98,922
New Uses	2,94,86,779	3,25,48,593	3,26,05,503	5,77,63,380	2,98,59,598
Average	3,64,52,770				
Growth	0	36%	72%	136%	168%

Source: Internet Live Stats (www.InternetLiveStats.com).

*As on July 1 of every year.

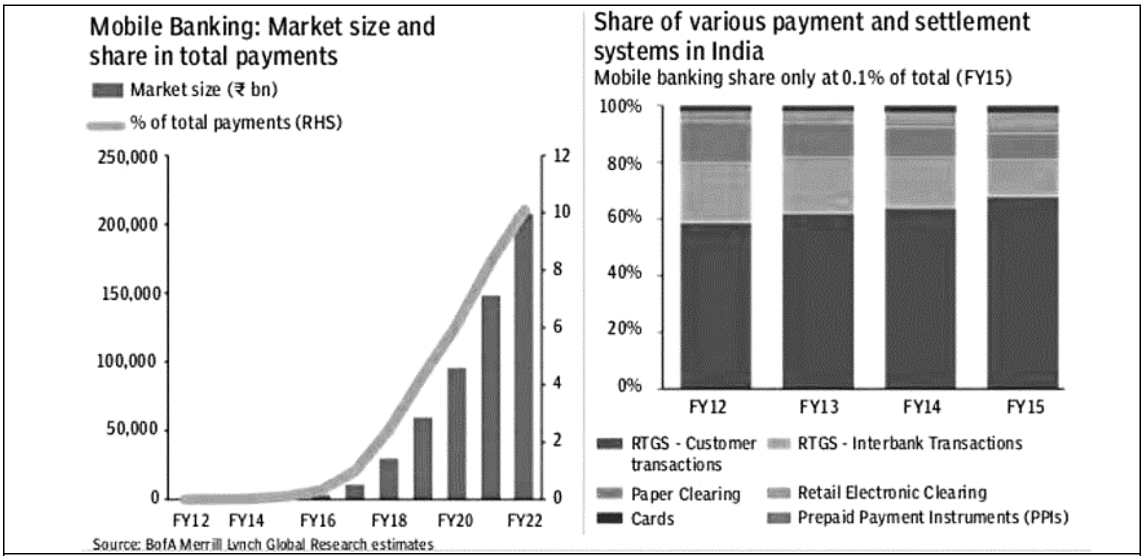


Figure 3 : Mobile Banking: Market Size

The electronic payment systems such as Electronic Clearing Service (ECS) credit and debit and National Electronic Fund Transfer (NEFT) have improved the speed of financial transactions across the country. Electronic Clearing Service (ECS) is one of the new electronic banking services. ECS is a non-paper based movement of funds which is encouraged by the RBI on a wide scale. ECS consists of- Electronic Credit Clearing Service & Electronic Debit Clearing Service. ECS brings down administration cost and ensures profitability and productivity to the banks. National Electronic Fund Transaction (NEFT) is a deferred net settlement system and is an improvement over other modes in terms of security and processing efficiency. This facility is currently available at various bank branches throughout the country.

Table 8: Volume & Value of Electronic Transactions by Scheduled Commercial Banks

	(Volume in million, Value in Rs. Billion)					
	Volume		Percentage Change (2012-13)	Value		Percentage Change (2012-13)
	2011-12	2012-13	2012-13	2011-12	2012-13	2012-13
ECS Credit	121.5	122.2	0.6	1838	1,771	-3.6
ECS Debit	165	177	7.2	834	1,083	29.9
Credit Cards	320	397	23.9	966	1,230	27.3
Debit Cards	328	469	43.2	534	743	39.1
NEFT	226	394	74.3	17,904	29,022	62.1
RTGS	55	69	24.5	5,59,308	6,76,841	25.5

The following table shows the volume of electronic transactions of Scheduled Commercial Banks. In average terms volume of ECS Debit is greater than ECS Credit. Growth rate in case of ECS Credit & ECS Credit has increased. Volume of NEFT has also increased & Growth rate in case of NEFT has increased remarkably.

Opportunities & Challenges

Internet facilities now-a-days is giving a vast market area both in terms of number of potential customers & geographical reach. Latest developed & updated technological development has made access to Internet both cheaper and faster. More and more people across the globe are accessing the net either through PCs or other devices. Anybody accessing Internet is a potential customer irrespective of his or her location. Thus, any business targeting final consumers cannot ignore the business potential of Internet facilities. Moreover, cost is also an important issue in an e-venture. It is generally accepted that cost of banking through Internet is less compared to the traditional banking. E-banking facilities provide a substantial cost advantage to customers and also save a lot of time. However the different opportunities & challenges of e-banking are discussed below:

- *Differentiating Products & Service*: Strategic decision making need to take into account the changing market structure like making strategic decisions about the products and services offered online and exploiting the service attributes that build customer retention for profitable customers. Banks may find their current customers switching from branch banking to PC banking, allowing a more efficient use of the bank's resources. An appropriate strategy must include methods to prevent customers from migrating to banks with competing online offerings. The ultimate market leaders will be those who enhance their image as customer-driven banks, even with those customers who do not use home banking.
- *Managing Financial Supply Chains*: Financial institutions are now able to offer a wider variety of financial services. However, if financial institutions choose to let software companies control their relationships with end users, the software companies can determine which business partners in the financial supply chains banks can choose. In fact a savvy brokerage provider would rather negotiate with a personal finance software company than with a bank. To attempt to gain advantage in this potentially lucrative market, banks are following three strategies- (i) Investing an unprecedented amount of capital in building information architectures, technology infrastructures & online banking products/services that will counter the threat from nonbanks and fundamentally change the way banks service retail customers. (ii) Seeking partners in the online financial supply chain that links customers, intermediaries, banks & third party service providers. (iii) Moving from a product-dominated (mass production) model to customer-centered (mass customization) model. The objective is to capture customer loyalty by providing an ever-increasing number of consumers with the luxury of more convenient, customer-centered (relationship) services that until now have been available only to major accounts.

- *Pricing Issues in Banking*: Perhaps the single most important issue driving consumer acceptance of online banking is pricing. Home banking services can be expensive to implement and operate, yet consumers are rarely willing to pay much more for this service. Pricing affects online banking at three levels- initial software pricing, financial product pricing & usage pricing. Banks need to balance a number of objectives when establishing pricing strategies. For example: Citi Bank dropped all fees for electronic banking services in 1995, its objective was to achieve market penetration among both existing & future customers. This strategy is based on the premise that market share & long term profitability are co-related.
- *Attracting & Retaining Customers*: Banks make a mistake trying to sell online banking services on the basis of convenience. While short term convenience is important, consumers want the long term ability to control & organize their finances more than they want convenience. Banks must look beyond home consumers for online banking consumers for attracting customers. The rapidly growing use of personal computers by small businesses provides a solid opportunity for banks to build a profitable base of small businesses until a broader consumer market evolves. On the other hand retaining customers involves providing integrated services. Banks must switch the costs of moving from one software platform to another to retain customers from moving. Customers are increasingly familiar using technology to access bank accounts and to handle financial affairs. Banks can realize the positive cost implications for the long term value of building customer loyalty. In the online world, there is not a big cost difference between serving one customer and serving one lakh customers. In short marketers must also work on building a loyal customer base not only in order to maintain the existing base, but also in order to be attractive to potential customers.
- *Back-Office Support for E-Banking*: Although banks are making great strides in developing the front-end interface, there needs to be a great deal of thought put into the re-engineering of back-office operations and systems. Back-office operations technology is often a crucial & misunderstood element of online banking. Managers often think of back-office systems and operations as a sub-ordinate function that should respond to their needs and desires and so quietly about handling all the back-office drudgeries that a manager should not have to worry about. This thinking will have to change to reflect the strategic nature of back-office systems and will need bank-wide commitment to keep up with new demands.

  But the challenge for banking industry lies in creating right atmosphere & providing right incentives for consumers to use personal computers regularly for banking & in making sure that they provide attractive & affordable services.
- *Infrastructural Barriers & Security*: Infrastructural barriers have a negative impact on e-banking development. There is lack of proper infrastructure for the installation of e-delivery channels. Customers believed that legal and security barriers and management and banking issues have more effect on e-banking development. The most serious threat faced by e-banking is that it is not safe and secures all the time. There may be loss of data due to technical defaults. Therefore, we can highlight for customers security is still a big concern for usage of e-banking services and the view of young and educated staff regarding e-banking is more supportive in India.
- *Socio-Cultural Barriers*: Even after adopting e-services by banks in India for so many years, some aspects of socio-cultural issues do not support e-banking and it is because of a lack of confidence in technology and an online culture. Since the foundation of e-banking is based on such premises, some of these local socio-cultural aspects do pose significant challenges for e-banking development.
- *Business Challenges*: E-banks are facing business challenges. For the transactions made through internet, the service charges are very low. Unless a large number of transactions are routed over the Web the e-banks cannot think of profit.
- *Resistance to Change*: There is lack of preparedness both on part of banks and customers in the adoption of new technological changes.
- *Lack of Training*: There is lack of technical training facilities to the employees of the banks. As a result customer awareness is also affected.

Suggestions & Recommendations

- E-banks should create awareness among people about e-banking products and services. Customers should be made literate about the use of e-banking products and services.
- Special arrangements should be made by banks to ensure full security of customer funds. Technical defaults should be avoided by employing well trained and expert technicians in field of computers, so that loss of data can be avoided.
- Employees of banks should be given special technical training for the use of e banking so that they can further encourage customers to use the same. Seminars and workshops should be organized on the healthy usage of e-banking especially for those who are ATM or computer illiterate.
- E-banking services should be customized on basis of age, gender, occupation etc so that needs and requirements of people are met accordingly.
- Government should make huge investments for building proper infrastructure facilities.

Conclusion

E-banking is a generic term for delivery of banking services and products through electronic channels, such as the telephone, the internet, the cell phone, etc. The concept and scope of E-banking is still evolving. It facilitates an effective payment and accounting system thereby enhancing the speed of delivery of banking services considerably. Banks are also moving in for technological upgradation on a large scale. Internet banking is expected to get a boost from such developments. Reserve Bank of India has taken the initiative for facilitating real time funds transfer through the Real Time Gross Settlement (RTGS) System. Generic Architecture both domestic and cross border, aimed at providing interconnectivity across banks has been accepted for implementation by RBI.

While E-banking has improved efficiency and convenience, it has also posed several challenges to the regulators and supervisors. Several initiatives taken by the government of India, as well as the Reserve Bank of India (RBI), have facilitated the development of E-banking in India. The existing regulatory framework over banks has also been extended to E-banking. It covers various issues that fall within the framework of technology, security standards, and legal and regulatory issues.

However, few managers have a clear vision of tomorrow's banking environment. In fact, few banks have strategic plans in place that anticipate the future of e-banking. The challenge for banking industry lies in creating the right atmosphere and providing the right incentives for consumers to use personal computers regularly for banking, and in making sure that they provide attractive & affordable services.

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ORAL PRESENTATION-23

Goods & Service Tax: Starting of a New Era in Indian Tax Regime

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Abstract: Indirect tax is the main source of revenue from the view point of Indian Government. There are different kinds of indirect taxes which have been prevailing in the Indian Economy since independence. The shortcomings of current indirect taxation scenario cannot be measured in terms of assessees' point of view but it should be judged from the viewpoint of economy. The entire nation has been suffering from the burden of multiplicity of taxes, uneven rates of taxes, cascading effects etc. year after years. So the nation demanded some kinds of simplicity and uniformity in the existing indirect tax structure which fuelled the slogan for "One Tax, One Nation". And it paved the way for GST. It is considered as the "Paradigm Shift". It is nothing but the most significant reform in the history of Indian indirect tax structure since independence. GST is nothing but a comprehensive tax leviable on manufacture, sale and consumption of goods and services at a national level. But how much it will be fruitful or worthwhile, future will prove that.

Keywords: Consumption, Electronic Ledger, Indirect Tax, Revenue, Service

Introduction

It was a long pending issue to introduce a "single taxation" system in India – the largest democracy in the world. The existing indirect tax structure is really full of complexities. Goods and Services Tax (GST) is such type of indirect tax merging most of the existing indirect taxes into single system of taxation. Around 10 years ago, first Indian govt. moved one step forward about implementation towards GST.

Finally, at last, GST came into force with effect from 1st July, 2017. Probably it is the biggest reform in the indirect tax structure since independence.

Major Reforms in Indirect taxation in India:

- In the year 1939 Sales Tax introduced in India in the State of Madras
- Later in 1941 Sales tax introduced in the State of Punjab; other states follow in later years
- In 1974 LK Jha Committee suggests introduction of value added tax (VAT) in India
- Again in the year of 1986 MODVAT or modified VAT, introduced on select commodities
- In 1991 Raja Chelliah Committee recommends VAT which one is a great milestone in indian tax system.
- In the year 2002 CENVAT or introduced on all commodities at central level
- In the year 2003 VAT introduced in first Indian State of Haryana later in 2005 VAT in 24 States/UTs and at last in 2006 VAT implemented in 5 more States including Rajasthan.
- In 2006- 07 Proposal for GST first mooted in the Budget Speech for the financial year. Negotiation with States started began soon after
- In 2008 Empowered Committee of State Finance Ministers (EC) engaged
- In 2011 Constitution Amendment Bill on GST introduced.
- In August 2013 Parliamentary Standing Committee submitted its report and the recommendations of Standing Committee incorporated in the Bill
- In 2014 Constitution Amendment Bill introduced in Lok Sabha and May 5, 2014 Lok Sabha passes GST Bill. Even also May 2015 Lok Sabha passes Constitution Amendment Bill for GST
- July 2016 Centre and states agree against capping GST rate in the Constitution amendment Bill

- In August 2016 modified Constitution Amendment bill in Rajya Sabha.
- Finally, at last, GST came into force with effect from 1st July, 2017

Girish Garg (2014) studied and found that GST is the most important steps towards the comprehensive indirect tax reform in India.

Thowseaf, M.Ayisha Millath (2016) studied that GST will make sure uniformity of taxes in different states in India. GST environment lead to an improved disclosure of tax structure which have a positive impact on Indian tax regime.

R. Vasanthagopal (2011) found different conflicting interests of various stakeholders with the implication of the constitutional amendment.

Lourdunathan F and Xavier P (2017) in their paper, 'A study on implementation of goods and services tax (GST) in India: Prospectus and challenges' stated that GST will relief to producers and consumers by providing wide and comprehensive coverage of taxes. GST formulation will lead to resource and revenue gain for both Centre and States majorly through widening of tax base and improvement in tax compliance. GST have a positive impact on various sectors and industry.

Research Objectives

a) To understand the concept of Goods & Service Tax.
b) To analyze the features of GST.
c) To know the Constitutional amendment regarding GST.
d) To know the benefit of GST.
e) To understand the key issues of GST.
f) To analyze the different procedure regarding implementation of GST.
g) To examine the challenges regarding implementation of GST.

Methodology

The research paper is based on explanatory research based on different journals, annual reports, newspapers and magazines covering wide collection of academic literature on Goods and Service Tax. Available secondary data was extensively used for the study. The research design was adopted for the detailed analysis and greater analysis for the purpose of study.

Results & Discussions

In the segment of indirect taxation, GST is a single tax on the supply of goods and services, right from the manufacturer to the ultimate consumer. Credit of input tax which is paid at each stage, is to be available in the subsequent stage of value addition. That is why GST is considered as a tax only on value addition at each stage.

More than 140 countries have been under the regime of GST. But our nation is following dual GST system like Canada and Brazil.

Models of GST

a) Central GST: here the revenue is collected by the Centre but the proceeds is to be distributed to different states (Eg. Australia)
b) State GST: Here only the state collects the GST alone (Eg. USA)
c) Dual GST: Clarifications is given below:
   It is of two types in nature as mentioned below:
   - Non-Concurrent Dual GST: In this case, GST on goods is leviable by States only while GST on services is collected by Centre. This practice is not followed by any country.

- Concurrent Dual GST: Here, GST is to be levied and administered by both State and Central govt. It is adopted by our nation, India.

Constitutional Amendment

In order to introduce GST, Constitutional amendment was necessary since India has been following federal structure of tax system. Basically Constitution empowers both Central and State to impose tax. Under Article 246, Seventh Schedule contains three lists. They are:

- List I – Union List – It empowers the Central Govt. to impose Excise Duty, Customs Duty and service Tax etc.
- List II – State List - It empowers the State Govt. to impose Sales Tax, Entry Tax, Luxury Tax etc.
- List III – Concurrent List – It empowers both Central and State Govt. to levy tax in certain cases.

Naturally, Central Govt. has no power to levy Sales Tax while state Govt. has no power to impose Service Tax. In order to solve these problems, the Constitution needs to be amended. The Constitution (122nd Amendment) Bill, 2014 was introduced in the Lok Sabah on 19th December, 2014. It was passed by both the houses of Parliament and The Constitution (One Hundred and First Amendment) Act, 2016 on 17th September, 2016. Ultimately, the Parliament enacted CGST Act, UTGST Act, GST Compensation Cess Act, IGST Act and all States must enact respective SGST Act.

Salient Features GST

a) One portion of GST is levied by the Centre i.e. CGST while other portion is levied by State i.e. SGST.
b) Both Centre and the State have concurrent powers in the administration of GST.
c) Uniform CGST and SGST rates.
d) Only single invoice is required for both CGST and SGST.
e) Again in case of inward or outward supplies from other state i.e. inter-state supplies, tax is to be levied under IGST.
f) There is no concept of “Negative List” of services, rather the classification between Exempted and Non-Exempted items are critically mentioned.
g) Separate registration is to be compulsorily obtained in each States.
h) Here, most of the dealings are to be happening online. It leads to a less interaction between the departments.
i) If any financial loss is faced by States due to implementation of GST, then provision of compensation is there. Compensation will be provided by Central for initial 5 years.
j) With the introduction of GST, “Origin based taxation” has been transformed to “Destination based taxation” system.
k) Exports of goods and services are “Zero rated” at both Central and State level.
l) PAN based registration is required for SGST and CGST and Inter-State dealers (On whom IGST is applicable) needs “migration”.

GST carries so much importance in the arena of indirect taxation in India. Year after year, our nation has been suffering from the complexities of existing indirect tax system. And here lies the importance of GST. The needs of GST are as follows:

a) Till now, there are different kinds of indirect taxes prevailing in the market. GST just removes this multiple taxation system and thereby makes the nation enjoying the facilities of “One Tax, One Nation” system.
b) It eliminates so many disputes arisen due to existence of different taxes together.
c) GST reduces taxes on manufacturers which ultimately helps to extend their businesses and provides them a level playing field in the domestic and international level.
d) In GST regime, the cascading effect of VAT, CENVAT and Service Tax will be removed and a continuous chain of set-off from original manufacturer’s point and service provider’s point upto the consumer’s level will be created. It is simply possible due to Input Tax Credit

(ITC) Mechanism. One of the mottos of introducing GST is to make the seamless flow of ITC in the system.

e) Revenue collection system would be much easier under GST regime with compared to current tax structure.

f) Imports are to be taxed at Basic Customs Duty plus IGST. Since credit of IGST is available, therefore it would make the imports cheaper.

g) GST helps to bridge the gap between Central and State regarding different tax related issues.

h) GST will help in culmination of over 25 years of indirect tax reforms which can enhance the efficiency of taxation, improve tax buoyancy and establish an integrated market nationally.

i) It is going to be highly beneficial for Indian companies as the average tax burden on companies will be reduced to a great extent.

j) Merger of several central and state taxes into a single tax regime can help in removing the existence of double taxation.

k) It is more transparent as compared to the existing tax structure.

l) It will help in reducing the tax evasion to a large extent.

m) Implementation of GST leads to a unified market within the country and helps in improving the movement of goods and services across the states along with reduction in the business costs.

n) GST has two components. One is CGST and another one is SGST. Since one is monitored by Central and another one by State, therefore tax governance will be more effective and efficient under GST regime as compared to the current tax structure.

Table 1: Taxes to be Subsumed to GST

Taxes to be subsumed to CGST	Taxes to be subsumed to SGST
Excise Duty	VAT/Sales Tax
Service Tax	Luxury Tax
Additional Excise Duty on Medicinal preparations	Entertainment Tax
Countervailing Duty (CVD)	State Cesses &Surcharges
Cesses	Purchase Tax
Surcharges	Purchase Tax
Special Additional Duty (SAD)	Taxes on lottery, betting, gambling

Filing of Return

Under current indirect tax regime, different forms are there for Service Tax, Excise Duty, CST etc. But in GST regime, the procedure of filling return is quite different. Normal or Regular taxpayers under GST regime would be required to file following returns:

Table 2: Filing of Return

Sl. No	Return Form	Purpose of Return	Cut-Off Date
1.	GSTR-1	Outward supplies made by the taxpayer	10^{th} of the next month
2.	GSTR-2	Inward supplies made by the taxpayer	15^{th} of the next month
3.	GSTR-3	Monthly Return	20^{th} of the next month
4.	GSTR-9	Annual Return	31^{st} day of December following the end of such financial year

GST Registration

Section 22 provides that every supplier shall be liable to get registered under this Act in the State or Union territory, other than special category states, wherefrom he or she makes a taxable supply of goods or services or both, if his or her aggregate turnover in a financial year exceeds Rs. 20 Lakhs (But in North-Eastern States and other specified States the limit is reduced to Rs. 10 Lakhs).

The taxpayer will be allotted a State-wise PAN based 15 digit Goods and/or Services Taxpayer Unique Identification Number, popularly known as GSTIN.

Table 3: GST Registration Form

State Code		Pan										Entity Code	Blank	Check Digit
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

Some Significant Terminologies

- *Supply*: GST is to be leviable in the case of supply of goods and services. Sec. 7(1) states that "Supply" includes all forms of supply of goods and/or services made or agreed to be made for a consideration by a person in the course of business such as:
  a) Sale
  b) Transfer
  c) Barter
  d) Exchange
  e) License
  f) Rental
  g) Lease
  h) Disposal
- *E-Way Bill*: It is an electronic way bill for movement of goods which can be generated on the GSTN common portal. If the value of the goods is more than 50000, then the movement of those particular items must be done if and only if the registered person has an e-way bill. It can be generated or cancelled through SMS.

Table 4: Validity of E-way bill

Sl. No.	Distance	Valid For
1	Less than 100 km	1 day from the date of generation
2	In between 100 km to 300 km	3 days from the date of generation
3	In between 300 km to 500 km	5 days from the date of generation
4	In between 500 km to 1000 km	10 days from the date of generation
5	1000 km or more	15 days from the date of generation

- *Electronic Ledger*: It is a new concept in GST law. Every deposit made towards tax, interest, penalty, fee or any other amount by a taxable person by internet banking or by using credit/debit cards or NEFT or RTGS or by any other mode, shall be credited to the Electronic Cash Ledger of such person which is to be maintained in the way as may be prescribed. The assessed can see the particular of tax paid by him in Electronic Ledger.

  The input tax credit as self-assessed in the return of a taxable person is to be credited to his Electronic Credit Ledger.
  The amount available in the Electronic Cash Ledger may be utilized for making any payment towards tax, interest, penalty, fees or any other amount payable under the provisions of the Act.

  Again the amount of ITC on account of IGST available in the Electronic Credit Ledger should first be used towards payment of IGST and the amount remaining, if any, may be utilized towards the payment of CGST and SGST, in that order.
  [ITC – IGST > IGST > CGST > SGST]

- *HSN Code*: The full form of HSN is "Harmonized System of Nomenclature". It is nothing but harmonized commodity description and coding system. Every business is required to declare a list of goods that it deals in. This declaration is needed along with the HSN code of such commodity. This system can automatically pick the exact tax rate of the commodity under GST regime based on the HSN code. So it is very important to mention exact HSN code at the time of enrolment or registration under GST.
- *SAC Code*: Like HSN Code, services are to be classified based on the "Services Accounting Code".
- *Anti-Profiteering*: This is another new concept. According to Sec. 171, it is mandatory to pass on the benefit due to reduction in rate of tax or from input tax credit to the consumer by way of commensurate reduction in prices.

Challenges against Success of GST

a) It requires too much dependence on Information Technology infrastructure which is very poor right now and might not be available in the near future.
b) Lot of confusions may arise due to misinterpretations of new legislations.
c) There is a lack of GST trained professionals.
d) Dual control and jurisdictions might create some problems.
e) "Place of Supply" is an important aspect under GST. But determination of "Place of Supply" is not an easy task.
f) Under GST regime, there are various categories in rate structures.

Conclusion

It is quite true that our nation has been suffering from the burden of different types of taxes which are full of complexities. So it is much needed to make the nation free from the trap of different types of taxes existing together. From the viewpoint of these, we can easily say that the introduction of GST is the revolutionary decision. It helps to promote "One Tax One Nation" policy. It can make the system more transparent and help to bring Central and State as close as possible by eliminating different disputes regarding imposition and collection of taxes. But how much it will be fruitful or worthwhile, future will prove that.

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POSTER PRESENTATION-1

GST Implementation: A Case Study

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Abstract: Goods & Service Tax (GST) is the new indirect tax system which rolled out on July 1, 2017. It is India's biggest tax reform in seventy years of independence. GST was first proposed in 2000 and it took seventeen years to form the legislation. GST is one indirect tax after subsuming large number of central and state taxes for the whole nation, which made India one unified market. The big tax reform mandated all business sectors, including financial service sector, in India to reconsider, entirely, its operations, transactions, accounting, compliance and IT systems. The case study analyses the process of GST implementation by a particular bank which falls under the category of a small bank[8]. It was observed that the bank had to undergo the process of clearing data in their IT systems at customer granular level along with obtaining customer addresses as a mandatory detail ,unlike earlier, for determining location of supply correctly, it had to collate all the required documents for registration under GST for all states it had presence in, also now it has to be prepared with details to file fifty three returns in a year as compared to only two earlier, petty cash expenses attracting reverse charge mechanism increased its paper work and its practice of car lease arrangements was done away with due to higher rates in GST. To conclude, the impact of GST on the bank was such that, due to their high volume of transactions and presence in various states, its IT system was required to be more vigilant in order to solve the complexity related to GST compliance and procedures. Therefore, the decisions for required IT system features during the process of GST implementation were very crucial for the small bank.

POSTER PRESENTATION-2

Digital Banking- A Modern Necessity or a Modern Trend?

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Abstract: Digital mega trend is impacting all businesses around the world. High speed connectivity, effective computer powers in smart phones, instant information and cheap unlimited storage has created disruptive new ways of serving customers. The traditional banking sector is also facing the impact of such technology. The customers are becoming increasingly comfortable in making transactions through digital channels for product purchase and services. Further, introduction of FinTech platforms and services have resulted in loss of opportunities and value for traditional banks. In order to remain contemporary and relevant, commercial banks have started innovating digital products and services. The increasing rate of technological change along with changing customer preferences gave rise to 'digital banking'. The objective of the study is to find out the area of strength, weaknesses, opportunities and threats of digital banking, to find out whether digital banking is a modern necessity or a modern trend and also to see what is the future of digital banking. The methodology used to conduct the study is descriptive in nature and all the information is taken from scholarly articles and RBI reports. The combination of higher spending power and a freer adaption of technological adoption provide banks and other financial institutions with a market of willing and able customers to offer better financial products/services at lower costs. Digital banking is a step towards creating a cashless economy. The cashless economy will help to keep a track of economic transactions and hence control black marketing practices Digital banking is just not the necessity of the modern world but also a step towards digital India.

POSTER PRESENTATION-3

Start Up India –In the light of "Paytm" Case Study

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Abstract: Prime Minister Narendra Modi unveiled the "Startup India Standup India" policy on the 17th of April 2015, as per a notification released by the Ministry Of Commerce and Industry. An entity will be identified as a startup till up to 5years from the date of incorporation, if its turnover does not exceed 25crores in the last 5 financial years and it is working towards innovation, development, deployment, commercialization of new products, processes or services driven by technology or intellectual property. Since announcement of the policy various innovative projects did come up. This paper will attempt to show the journey, growth and success story of India's largest mobile payment platform PAYTM, a successful startup, where most of its revenue comes from utility bills, app downloads and online purchases, with the core strategy of enhancing online-to-offline and offline-to-online businesses. The study for this paper exhibits both descriptive and analytical data. The secondary data for appropriate conclusion is also analytical in nature. The concerned study has led us to the findings that Paytm is skillfully positioning in users mind by its cash back Policy which in turn is a Customer Acquisition Cost for them to achieve its high goals with a vision to become the Master/Visa Card of online payment system in near future.

POSTER PRESENTATION-4

Online Banking – A Phenomenal Change in Indian Banking Industry

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Abstract: Internet banking is changing the banking industry, having the most important effects on banking relationships. Banking is now no longer restricted to the branches were one has to approach the branch in person, to withdraw cash or deposit a cheque or request a statement of accounts. In true Internet banking, any inquiry or type of transaction is processed online without any reference to the branch (anywhere banking) at any time. Internet banking is increasingly becoming a "necessity" than a "fashion". The net banking, thus, now is more of a norm rather than an exception in many developed countries due to the fact that it is the most efficient way of providing valuable and banking services. This research paper will basically look into the various types of advantages what an investor can get in spite of its few limitations of e-banking.

POSTER PRESENTATION-5

Implication of Corporate Governance: A Feminist Perspective in Context to Indian Companies

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Abstract: The concept of corporate governance implies to the set of rules and regulations that has been declared and is to be adhered by every employee, employer and other stakeholders for the better performance of the organization. Governance of an organization should be such which is communicated from the top level of management to the most bottom layer. All corporate works with the basic motive of earning profit for the organization, but with the changing environment business implies more than that of only profit. Thus governance takes an active role in how the corporate can earn profit after maintaining its social status. With correct structure of rules and regulations the organization can not only increase the amount of profits earned but also other qualitative aspect of the organization. Thus a strong management Board can only suffice this governance procedure. Thus with the emerging importance of corporate governance given to each organization, it should have a women board of director as a mandate by the amended clause of Companies Act 2013. I being a representation of the women society completely support this endeavor. In this paper I shall speak about the changes about by this radical change from board rooms to the entire corporate scenario.

POSTER PRESENTATION-6

Corporate Environment Health and Safety Legislations – A Tool for Industrial Compliance Management

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Abstract: Increasing awareness about Environmental protection and policies of sustainable development is leading most of the large corporate sectors now days to obtain Industrial Compliance through judicious application of Environment, Health and Safety (EHS) Legislations. Constitution 42nd Amendment Act of 1976 expressed its will for the protection of environment articulated in Section 48A and 51A (g). This inclusion plays a comprehensive and significant role in guiding industries to maintain prescribed Environmental Standards and set up proper corporate environmental management framework. Modern EHS legislations are being implemented since 1974 through Water (Prevention and Control of Pollution) Act, 1974 followed by several other acts and rules. These legal measures cover a huge fraction of protection and conservation of environmental qualities. They come with a meticulous arrangement of laws and rules that guide companies throughout to achieve the annual environmental compliance from the government of the country. Pros and cons of the pollution laws, industrial waste handling and disposal rules have been serving corporate sectors to develop their sustainable development policies along with contemporary business strategies. This ultimately finalizes the Environmental Performance of the companies in the open market. Present work gives a complete outlook of EHS legislations applicable to the industries as per the Constitution of India. Scopes and limitations of these measures in industrial compliance are also highlighted. Finally some suitable suggestions are made to improve overall performance of industries.

POSTER PRESENTATION-7

Analysis of Micro Pension Initiatives of Select Micro Finance Institutions in West-Bengal

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Abstract: The word Financial Inclusion means financial inclusion in the list of Bank Account Holder of those rural poor people who are excluded in the list or unreachable for accessing this facility. For Financial Inclusion Micro Finance Stretch out its hand to the Unreached Rural poor people through its branches i.e. Micro Credit, Micro Insurance & Micro-Pension. Micro-Pension is a tool of providing pension facility to safeguard the interest of those rural poor people who are unable to get Formal Pension Facility. This paper consider only Micro Pension as a tool of Financial Inclusion by analyzing Micro Pension Initiatives of select Micro Finance Institutions in West-Bengal by conducting Field Survey on the basis of convenience sampling methodology on the holder of Micro pension of Select MFIs in West-Bengal and also by accessing different Articles, Journals etc. It is concluded that though Micro-Pension just started its Journey but it is able to include the unreached people under the purview of Financial Inclusion.

POSTER PRESENTATION-8

Start-Ups in India – Case Studies

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Abstract: The startup journey of any leading organization today has never been easy. The idea of fresh mind finds it hard to gather funds for the establishment of their business. Along with it is hard enough to develop a viable product to acquire a considerable market place amidst this cut throat competition zone. The prime objective of the study has been to look into the funding process of the Indian startups and the nature of investment made. The study also gives a brief data on the profits and losses of the startup, and the government role and policies adopted. The methodology adapted is based on secondary data and information from articles, sites, and magazines. The study shows the sources of capital raised in various rounds depending on the performance of the company that is the leading factor in attracting investors, the flotation of the company and the business model adopted in the given startup ecosystem.

POSTER PRESENTATION-9

An Overview of the Implementation of Indian Accounting Standard (Ind AS) Considering the Challenges and Opportunities of IFRS

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Abstract: As a part of its G-20 India have to adopt IFRS (International Financial Reporting Standards). To become an IFRS-converged country as promised by Asset Valuation, India has to adopt the IFRS. But the ICAI, the premier body established by an act of Parliament has now issued Ind ASs (Indian Accounting Standards) which are converged and now at par with IFRS. The ICAI, MCA and Government are all set and ready to implement those converged Ind ASs at the earliest. This paper focuses into the comparison between the IGAAP and Ind AS and its impact sector-wise. Its first time adoption and its effectiveness have been explained in the paper. The financial statements and operating segments are mentioned herein. The objective is to focus on the need, applicability and provisions. Ind AS will bring changes in the Financial Reporting System. The purpose of this study is to highlight the consequences of this financial reporting system.

POSTER PRESENTATION-10

ETF as an Emerging Investment Option in Indian Capital Markets

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Abstract: After global popularity, the concept of Exchange Traded Fund (ETF) has penetrated the capital markets of India, but is still in its initial growth phase. ETFs are simple products compared to individual stocks or actively managed mutual funds and indexed funds. This paper analyses the process, growth and creation of ETF while focusing on the various types of ETFs presently traded in India, along with a comparative study with mutual funds. Starting with the first ETF in India in 2001, it has been found that the Average Daily Traded Volume of Equity ETF in the last 10 years has grown annually by 32%. The retail interest in ETFs has been increasing. The number of investors trading in ETFs has increased by 82% in FY 2016-17 over the previous financial year. These funds consistently outperformed the market index and generated higher returns. Along with the discussion on future prospects of ETFs in India, the paper also provides few recommendations for investors.