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Determination that a true manager or leader must make every day...

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Volume 7 : Issue 1

SANKALPA

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Journal of Management & Research

SANKALPA : Journal of Management & Research

aims at bringing out the intricacies of Management perspectives, concepts, and applications. The focus is on Indian Management and its interplay with Global Management knowledge, best-practices and research.

This issue is sponsored by : Dr. Rekha Srivastava and Dr. Satendra Kumar, Professor & Head, Ph.D Research Center, CKSVIM



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Message from Prof. (Dr.) Navin Sheth, Hon'ble Vice Chancellor of GTU



I am very pleased to learn that **Sankalpa : Journal of Management & Research** (ISSN No. 2231-1904) is coming out with the January - June issue for the calendar year 2017. This journal promoted by C. K. Shah Vijapurwala Institute of Management, Vadodara has continued its success story with rising circulation since January 2011.

I am glad to know that the journal attempts to articulate the trust and Institute's legacy of supporting and promoting higher education particularly in the areas of Management, Technology, Leadership and Ethics. It follows a double blind referred process and contains empirical and conceptual research articles written by faculty members of Management and other allied disciplines from all over the country. Over and above these, the journal also makes a conscious attempt to publish case studies articulated by faculty members from management institutes.

I congratulate the Editorial board and support staff of the journal, for coming out with knowledgeable issues since 2011 and in particular Dr. Rajesh Khajuria for being the driving force behind the journal and leading it successfully into its 13th issue.

At this juncture, I wish **Sankalpa : Journal of Management & Research** continues its goal of knowledge creation in the academic field of management education.

Prof. (Dr.) Navin Sheth
Vice Chancellor
Gujarat Technological University

Editor-by-Invitation

Journey From January 2011 to January 2017



I have great pleasure in presenting the January- June Issue of the Seventh Volume of our prestigious Journal of Management and Research-'SANKALPA'.

The publication of the Journal thus enters into Seventh Year and with this, we all the members of CKSVIM family and members of the Editorial Board may take pride in its uninterrupted journey of Six Years.

The present issue contains refereed research papers in the areas of Finance, Marketing, Business Ethics and Corporate Governance besides two case studies, one received, by invitation, from two authors from Poland, namely, Dr.Wlodzimierz Olszewski, and Dr. Dariusz Zajac on ' Mergers of Universities in Poland- selected legal and marketing aspects' and the other one written by Dr. Puja Jain on 'Assessment Centre at Vardhaman – Gauging Potential for Growth' . I take the opportunity of conveying my sincere thanks to the authors of both the Case Studies.

Our Journal continues to provide opportunity to young teachers and researchers from India and abroad for communicating their research findings. The present issue contains research papers from seven authors besides two case studies.

I am happy to foresee the award of Ph. D. Degrees to Eight Ph. D. Students who have pursued their research from CKSVIM, and have submitted their Ph. D. Thesis during the last academic session.

I extend my invitation to all the researchers in Management and other allied field to continue to enrich 'SANKALPA' by their invaluable contributions.

January 31, 2017

Dr. Satendra Kumar
Professor and Head
Ph.D.Research Centre



From the Heart of Editor-in-Chief...

Gujarat Technological University - Vision 2021: Education-Research-Employment



We welcome **Prof. Dr. Navin Sheth** as our new **Hon. Vice Chancellor at Gujarat Technological University (GTU), Ahmedabad, India**. My heartiest gratitude to Dr. Sheth for his kind and inspiring words of applaud for our **SANKALPA: Journal of Management & Research**. Please visit www.gtu.ac.in for his message to the students and teachers community at large.

We also welcome **Prof. Dr. Dariusz Zajac, Chancellor, and Prof. Dr. Zdzislaw Polkowski** from **UJW University, Polkowice, POLAND** to **CKSVIM Vadodara, GTU Ahmedabad and SIES Navi Mumbai** at present, as a part of our **MOU** signed by me/us with GTU and CKSVIM in May 2016 at Poland.

D. Zajac, W. Olszewski, "Mergers of universities in Poland - selected legal and marketing aspects (case study)" is published by Invitation in this edition. Do read.

My heartiest **Congratulations** to the entire team of **SANKALPA Journal** including the **International Board of Scholar Reviewers, Editorial Board, Editorial Committee, Principal Asst. Editor, Asst. Editors, authors** as well as our **Admin staff**, to make 'SANKALPA' now available **online through ProQuest (U.S)**. **ProQuest** is committed to empowering researchers and librarians around the world. **ProQuest** over the years have built a growing content collection that now encompasses **90,000 authoritative sources, 6 billion digital pages and spans six centuries**. It includes the **world's largest collection of dissertations and theses; 20 million pages and three centuries of global, national, regional and specialty newspapers; more than 450,000 ebooks**; rich aggregated collections of the world's most important scholarly journals and periodicals; and unique vaults of digitized historical collections from great libraries and museums. My deepest gratitude to the **ProQuest Team** based at **The United States of America (USA)**, to have made our journal available online to enable its worldwide circulation.

CKSVIM Business School (set up by **Shri Mahaviar Jaina Vidyalyaya, a 101 year old Trust** based in **Mumbai**) is the first MBA School of India Accredited by **Accredited Council for Business Schools & Programs (ACBSP), USA** in 2014-15. We are proud to be affiliated with **GTU**.

Let me talk a little about GTU, a Great Technological University in India...

Gujarat Technological University (GTU) is at the forefront of Engineering, Management, Pharmacy, Computer Application and Hotel & Catering Management education in the State of Gujarat, and one of the best in some 20 Technical Universities in India.

Under the stewardship of first Vice Chancellor **Prof. Dr. M. N. Patel** (2 years), followed by **Dr. Akshai Aggarwal** (6 years), GTU has seen great growth of number of colleges from less than 100 to close to 500, and amassed a wealth of knowledge, topped up by a large number of Awards, Accolades and Recognitions at State and national levels.

My Vision for GTU in 2021:

"To increase Quality and Reach of Education, and create Industry-linked Opportunities for Skill Development, Training, Placement and Startups (Entrepreneurship) for 45 million youngsters of Gujarat State through full-time, part-time and virtual degree, diploma and certification programs."

GOAL:

100% Admissions - 100% Education - 100% Skill Development, 100% Jobs / Enterprise.

Values Proposition:

"Education – Research – Training – Employment - Startup"

Objective:

"To attain Top 10 position in India, Top 50 in Asia and Top 200 in the World Rankings by 2021."

5-T Strategy for GTU...

TRUST

Generating **TRUST** among its stakeholders: Students, Teachers, Trustees and Government, for:

- Developing University Infrastructure, and making Appointments in line with Restructuring of GTU in consultation with the State Government and MHRD/UGC/AICTE/NAAC/NBA etc. (I worked on **DSTU Project as Coordinator**, that attracted over 70 Vice Chancellors and Registrars from all over India to deliberate, and a Book may be published!).
- Attracting more students to fill about 100,000 vacant seats in affiliated colleges.
- Ensuring to deliver high quality education, conducting quality examinations and assessments, and bringing up students' success rate from 40-50% to 80-90% in passing exams.

TECHNOLOGY in EDUCATION and RESEARCH

- Leveraging new Technologies and upcoming revolutions like **Industry 4.0, Agriculture 4.0** (as talked by **Prof. Charles Savage from Munich, Germany**) and **Education 4.0** I believe, and encouraging its percolation up to the bottom level colleges and students in rural and urban areas.
- Promoting Quality Research and starting new university Journals in technical education domains.
- Increasing collaborative teaching, learning, research and publications at national and international levels in 50 countries.

TRAINING and SKILL DEVELOPMENT :

- Skill Development of students and teachers on top priority to meet with Honourable Prime Minister's 5 National Missions: Skilling India, Make in India, Start up India, Innovation India and Clean India.
- Leveraging Industry-Government Linkages to create extra-ordinary opportunities for Training and Placement of Students.
- Faculty Development and Deployment Programs (FDDPs).

TRANSFORMATION :

Bringing in TRANSFORMATION in the Mindsets of key stakeholders through :

- Bharatiya Education System with emphasis on bringing out excellence with great human behaviour qualities like CARE, CREATIVITY and COMPASSION.
- Rural Colleges Development.
- Global / International Collaboration / Cooperation with 50 new universities in five continents of Asia, America, Europe, Australia and Africa for Joint Degree Awards, Exchange of Students and Teachers, Joint Research and Publications.
- Integrating Science, Technology and Management in Higher Education, to create super-specialists, specialists and generalists as per market/sectoral demand.

TROPHY :

- Instituting Scholarships for deserving students on Merit-cum-Means basis.
- Recognising Outstanding Students, Teachers and Staff through Awards etc.
- Encouraging Students to achieve top ranks in NCC, Sports and Service to Society.
- Encouraging Teachers to undertake research in emerging areas of Defence, Manufacturing, Management, Healthcare, Computer Science, and Multi-disciplinary areas.
- Increasing research papers' publication in international and national journals of repute.

That's all !

We truly value various contributions in the form of research articles from professors and researchers from India and world-wide, which go through double blind review process, and financial; contribution of **my Guru Prof. Dr. Satendra Kumar, Chairman, PhD Research Centre, CKSVIM** since beginning in the year 2009.

Please keep helping us help the teaching-learning-research-publication-placement process.

God helps those who help others!

Prof. Dr. Rajesh Khajuria,
Director, CKSVIM
Dean and Chairman, Global MBA Program, GTU
Chair Elect, South Asia Council, Region 10, ACBSP, USA
Visit: www.cksvim.edu.in / www.gtu.ac.in / www.acbsp.org

श्रद्धावाँल्लभते ज्ञानं तत्परः संयतेन्द्रियः । ज्ञानं लब्धा परां शान्तिमचिरेणाधिगच्छति ।।

"One who has faith and who with controlled senses is devoted to
attaining this wisdom is successful in his/her endeavour.
With wisdom and knowledge, he/she quickly attains the supreme peace."
- Bhagvad Gita

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APPEAL TO THE AUTHORS AND CONTRIBUTORS

The present issue (Volume 7, Issue 1) is the Jan-June 2017 Issue, which contains research papers / articles in various areas of Management and Research. The bi-annual Journal 'SANKALPA' portrays our strong conviction to disseminate the thinking of academicians and practitioners in the field of Business Management discipline, which they communicate through their 'Reporting' in the form of research papers, articles, study reports, case studies, original conceptualizations with logical vigor and vision.

The members of the Editorial Board appeal to all the academicians and practitioners to communicate their 'Reporting' to the Editor-in-Chief for publication in our subsequent issues, through the e-mail ID : publications@cksvim.edu.in

Please See **Guidelines for Authors & Contributors**
Call for Case Studies

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HEF Gujarat Chapter's 4th Regional Conference on The Theme

'Preparing Students for Career Success'

Date: 19th November 2016 (Saturday), 9.30 a.m to 3.30 p.m @ CKSVIM, Vadodara





Report on HEF Gujarat Chapter's 4th Regional Conference 'Preparing Students for Career Success'

Date: 19th November 2016 (Saturday), Time : 9.30 a.m to 3.30 p.m

Higher Education Forum (HEF) Gujarat Chapter's 4th Regional Conference on the theme "Preparing Students for Career Success" was scheduled on 19th November 2016 (Saturday) at **CKSVIM Business School, Vadodara**. The Conference explored and shared the strategies which can prepare our students for career success in the present hyper-turbulent environment, through two Panel Discussions, Speeches and Round-Tables by **22 eminent speakers from India and abroad**. The Conference brought together the academicians, industry personnel, professionals, students and industry association members to present ideas and debate on the theme.

The theme for this Regional Conference was inspired from Accreditation Council for Business Schools & Programs (ACSBP), USA Conference 2016 which was scheduled on Nov 2-5, 2016, in Cancun, Mexico USA. CKSVIM Business School is accredited by ACBSP, USA. The Conference aimed to explore and share successful strategies as to how can we, as educators, transform our classrooms to meet the ever-changing marketplace and provide the greatest educational value for our students.

The inaugural ceremony was blessed by the **Chief Guest** of the event **Prof. Parimal Vyas, Vice-Chancellor, The M. S. University of Baroda**; **Guest of Honour Dr. Raj Agrawal, Director, AIMA-CME, New Delhi**; **Patron Dr. A.K. Sen Gupta – Chairman, HEF, Mumbai**; **Special Invitee Dr. S O Junare, Registrar, Raksha Shakti University, Govt. of Gujarat, Gandhinagar**; **Shri Divyangbhai Shah- LMC Member, SMJV's CKSVIM Vadodara** and **Dr. Rajesh Khajuria - Chairman, HEF Gujarat Chapter & Director, CKSVIM Business School**.

Dr. Rajesh Khajuria, Chairman, HEF Gujarat Chapter & Director, CKSVIM Business School started with the opening speech by introducing the conference purpose and its theme. He said that it is for the first time the conference consisted of- 22 speakers in six hours. In his Opening Remarks he enlightened on the 5 powers which are very important, which **Power of student, Power of Teacher, Power of Education, Power of Technology and Power of Prayer**.

Prof. Parimal Vyas, Vice-Chancellor, The M. S. University of Baroda (Chief Guest), shared his views on the topic '**Political will for improving Higher education in India: HYPE OR HOPE**'. He concluded by saying that the three pillars of the government's plans for education also reflects the realities viz. Expansion, Equity and Excellence.

Dr. S O Junare, Registrar, Raksha Shakti University, Govt. of Gujarat, Gandhinagar (Special Invitee), congratulated the organizers. He shared that 'Management education' is dynamic; and in Management Education we don't teach, but we motivate students to learn new skills; we orient them towards enhancing their decision making skills, analytical skills, enhance their research-orientation and communication skills.

Dr. Raj Agrawal, Director, AIMA-CME, New Delhi (Guest of Honour), opined the need to identify the skills which we lack in and to develop the right kind of 'domain-competencies and skills'. He discussed the need to develop 'Occupational Standards' for each job.

Dr. A.K. Sen Gupta – Chairman, HEF, Mumbai (Patron) as a vivacious orator discussed on the role of B-Schools to prepare for success. He discussed about the Philosophy of 'knowing', 'doing' and 'being'. He discussed the need among student and faculty fraternity to dip into the 'depth of knowledge'. He concluded by saying... 'Read thoroughly, have in-depth knowledge and work in ground'.

Shri Divyangbhai Shah- LMC Member, SMJV's CKSVIM Vadodara, spoke on the essence of 'Jain ideology' which is based on 'ahimsa'. He shared that Jain ideology based on Lord Mahavira's teachings talks of emphasizing on 'knowledge' first and then 'ahimsa'...which shows the essence of knowledge from time unknown.

The Inaugural Session also showcased the launching of **AIMA – PGDM & 1 Year Professional Diploma in Management** in collaboration with All India Management Association, New Delhi (AIMA). In addition to AIMA Programs, CKSVIM also launched the **NSE Certification in Financial Markets (NCFM) and NSE Certified Capital Market Professional (NCCMP) Certification Program**.

An MoU was also signed with the **Japan Education Centre In India (JECI)**, between **Mr. Raj Adhikary, Founder & CEO, JECI and CKSVIM**, to encourage Japanese language education as one of the foreign languages to be offered at the institute.

The 4th Regional Conference by HEF endeavoured to recognize and value excellence, consistency, high level of teaching, and innovation in Colleges, Universities and Institutions as well as efforts by individuals to enhance industry-academia linkages. With this as the back-drop it announced **two prestigious awards: 'Innovation in Education Award 2016'**, sponsored by **Peregrine Academic Services, USA** and '**Industry - Academia Partnership Award 2016'**', sponsored by **SEAA, (Standards for Educational Advancement & Accreditation) Trust New Delhi**, with the aim to recognize the academicians, outstanding professionals and organizations that have out-performed in the fields of education or in building industry-academia linkages. **Nine awardees** were awarded with the coveted '**Innovation in Education Award**'.

The Nine awardees of the 'Innovation in Education Awards' were:

1. **Dr. K.S.Murthy**, Provost, ITM Vocational University, Vadodara
2. **Dr. Jigna Trivedi**, Director (I/c), Shri Jairambhai Patel Institute of Business Management & Computer Application, Gandhinagar
3. **Sh. J.K. Nair**, Director, Vivek Institute of Training and Learning Pvt. Ltd.
4. **Dr. Dheeraj Mehrotra**, Academic Evangelist, Next Education India Pvt Limited, Hyderabad

5. **Dr. Pradeep Singh Choondawat**, Dean, Faculty of Arts & Professor & Head, Department of Sociology, The MSU of Baroda
6. **Mr. Sameer Rohadia**, Assistant Professor, C.K. Shah Vijapurwala Institute of Management, Vadodara
7. **Dr. Kunjal Sinha**, Associate Professor, C.K. Shah Vijapurwala Institute of Management
8. **Dr. Anjali Jivani**, Head, Computer Science Dept., MSU, Baroda
9. **Mr. Manish Soni**, Founder, Sulekh Gujarati Software

Seven awardees were felicitated with the 'Industry-Academia Partnership Award 2016'. **Dr. Satendra Kumar, Prof. & Head, PhD Research Centre, CKSVIM and Dr. Pukhraj Maroo- Former Chief Addl. Secretary, Govt. of Madhya Pradesh (Special Invitee)** conferred the awardees and congratulated the organizers for recognizing the work in the field of academia and industry-academia linkages.

The Seven awardees of the 'Industry-Academia Partnership Award 2016' were:

1. **Dr. M.N. Parmar**, Dean, Faculty of Social Work, The M S University of Baroda
2. **Dr. Beena Patel**, Sr.General Manager and Head R&D, Abellon Clean Energy Limited
3. **Mr. Shailesh Thakkar**, Independent Soft Skill Trainer
4. **Dr. Ankit Shah**, Asst. Prof. and Training & Placement Officer C.K. Shah Vijapurwala Institute of Management, Vadodara
5. **Sh. K.R. Rohadia**, Training Administrator, Linde Engineering India Pvt. Ltd
6. **Mr. Raj Adhikary**, Founder & CEO Japan Education Centre in India (JECI), New Delhi
7. **Mr. Sunil Modi**, Member Adviser, GCSR, Gujarat Technological University

All the **Partner Institutions** were felicitated with a memento presented to the Office Bearers for their contributions and support. The Office Bearers of **Peregrine Academic Services, USA ; Standards for Educational Advancement & Accreditation (SEAA) Trust New Delhi; Federation of Gujarat Industries (FGI); Vadodara Chamber of Commerce & Industry (VCCI); Confederation of Indian Industries-Young Indians (CII-YI); Vadodara Innovation Council (VIC) and Indian Society for Training & Development (ISTD).**



A Panel Discussion on 'Preparing Students for Career Success', with **Dr. K.S Murthy, Provost, ITM Vocational University, Vadodara as Session-Chair** and Panel-Speakers **Mr. T. Raman, Chairman, SEAA; Dr. Olin O. Oedekoven, President & CEO, Peregrine Academic Services, USA and Mr. Steven Pietsch, National Director, Bloomberg Business Week's B-School Connection Program, USA**, highlighted the evolving need for making our students industry-ready, possessing ethical attributes....as well as the onus of brand identity shifting from 'institution' to 'individual'.

Another **Panel Discussion on 'Industry Academia Partnership'** had **Ms. Avi Sabavala, President, BMA as the Session-Chair**, and **Mr. Hemant Vadalia from Vadodara Chamber of Commerce & Industry (VCCI); Mr. Nitesh Patel, Secretary General, Federation of Gujarat Industries (FGI); Mr. Raj Adhikary, Founder & CEO, - Japan Education Center In India (JECI) and Mr Kartik Shah, National Yuva Chair, Yi**, as the enlightened Panel members. They spoke on the essence of developing 'I CAN' attitude, as well as the need to start with long-term internship programs and incubation-centres.

Round Table on 'Innovation in Education' had **Dr. Kamal Taori, (Retd. IAS), as the Session Chair**; the other renowned speakers being **Mr. Jagdish Shukla, Vadodara Innovation Council (VIC); Dr. Mitesh Dadhanania, Academic Director, Education Vertical – Khyati Foundation, Ahmedabad and Ms. Bhawika Wanchoo, Chief Manager, National Stock Exchange, Mumbai**. Each of the Panel-discussions and Round-Table was followed by an open-forum, with inputs and questions from the audience. The conference concluded with the Concluding Remarks and Vote of Thanks presented by **Ms. Ranjita Banerjee, Asst. Professor, CKSVIM**. The Concluding Remarks gave a holistic orientation of the conference.

The Conference concluded with numerous strategies to transform our classrooms to meet the ever-changing environment and develop avenues to explore the industry-academia linkages to create a successful platform for the student-fraternity. The onus now lies in implementing and walking the talk by all the stake-holders for ensuring a bright future for our students. Deepest gratitude to the chief organizer **HEF**, venue organizers **CKSVIM, Knowledge Partners** of the grand event **FGI, VCCI, CII-YI, VIC and ISTD; and the Award Sponsors SEAA and Peregrine, USA;** for organizing such a vibrant event.

By Invitation

Mergers of Universities in Poland - Selected Legal and Marketing Aspects - Case Study

Dr Włodzimierz Olszewski : Rector of Jan Wyżykowski University, Poland

Dr Dariusz Zajac : Chancellor of Jan Wyżykowski University, Polkowice, Poland



Introduction

An important effect of political and economic transformation in Poland is the formation and development of educational services market, including higher schools - public and non-public ones.

Since the beginning of the 90s higher education market was dynamically developing in accordance with the growth of educational aspirations, decentralisation and demographic peak which could be observed in the growth of undergraduates and higher school numbers. It has led to the mass education on higher level, creation of competitive environment and consequently to marketing oriented management. Presently, the so called educational boom is definitely coming to its end (the result of demographic decline) which means the loss of potential undergraduates and closing of some schools (mainly non-public ones). One of the possible remedies for the schools which want to survive in the more and more difficult and shrinking market: is merging, particularly for small local educational entities.

The article presents the merging process of two Lower Silesian higher schools located in the Copper Basin region and the

creation of a new brand. It can be an example of a successful consolidation of schools which, in the process of marketing management, want to respond to a new market challenge.

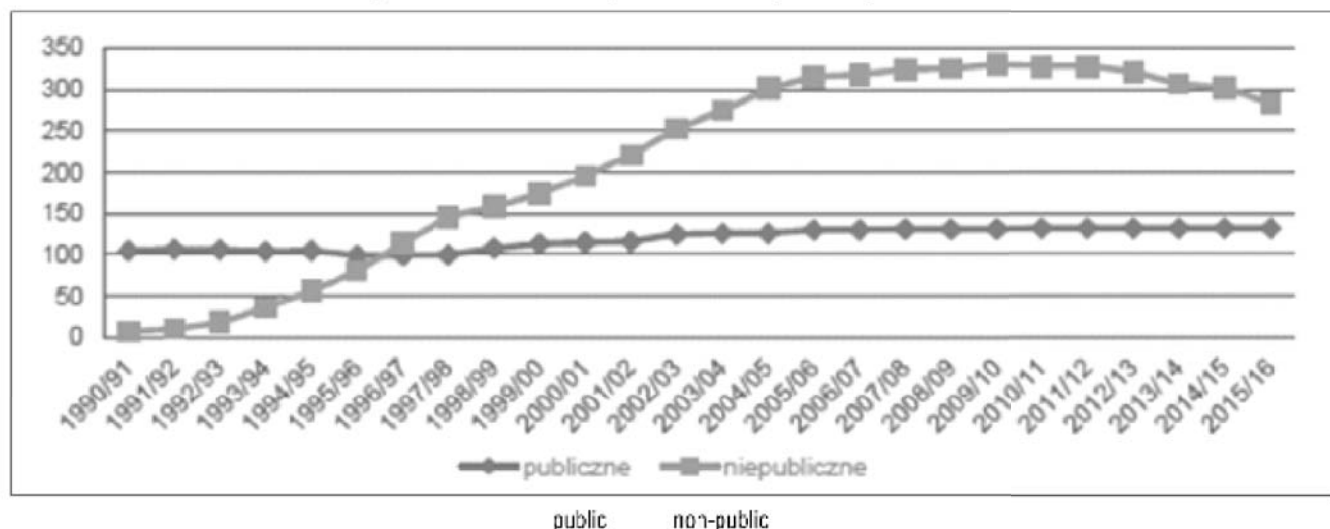
Higher educational services market after political system transformation – characteristics and prospects

Higher education development in Poland after 1990

A dynamic development of higher education in Poland was the result of political transformation which formed legal conditions for creation of non-public schools. The second significant reason was growth of educational aspirations (with the participation of Ministry of National Education) which resulted in a significant growth of secondary school students number – mainly general upper-secondary schools which naturally led to continuing their education at higher schools where undergraduates could obtain vocational qualifications.

The situation overlapped with the nineteen-year-olds demographic peak creating 15-year-long higher school educational boom (mainly non-public ones) - Figure 1

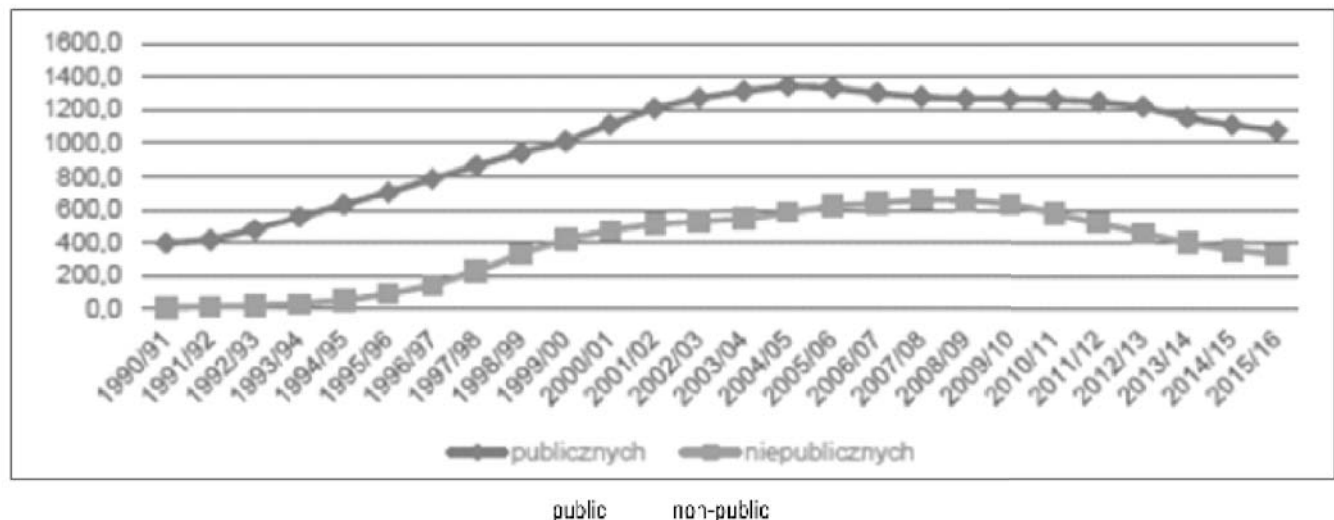
Figure 1: The number of public and non-public higher schools



(Source: Żyra M.Jed), Szkoły wyższe i ich finanse w 2015 roku, Główny Urząd Statystyczny (Central Statistical Office), Warszawa 2016, p.30.)

In the peak academic year 2005/2006, according to Central Statistical Office, the number of undergraduates amounted to 1 953 832 people, that is 370% more than in 1990, and then it started decreasing to reach the number of 1 405 133 people in the academic year 2015/2016 - Figure 2.

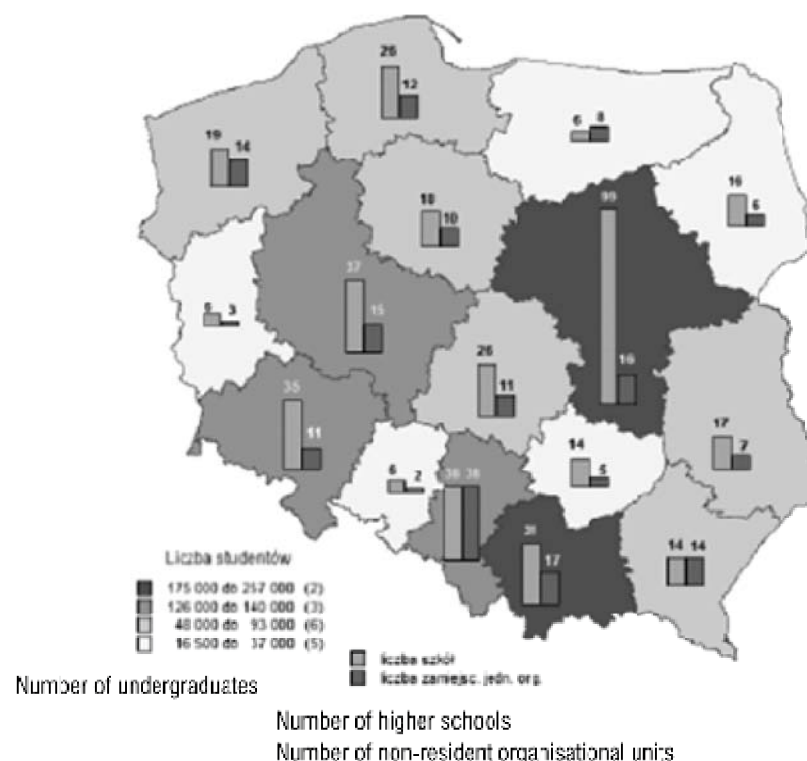
Figure 2: The number of students in public and non-public higher schools



(Source: Żyra M. (ed.), Szkoły wyższe i ich finanse w 2015 roku, Główny Urząd Statystyczny (Central Statistical Office), Warszawa 2016, p.31.)

The distribution of higher schools in Poland is uneven and dominated mainly by big cities (Warszawa, Kraków, Wrocław, Łódź) which reflects the following voivodships: mazowieckie, małopolskie, dolnośląskie and górnośląskie – Figure 3.

Figure 3: Undergraduates and higher schools according to voivodships in the academic year 2015/2016



(Source: Żyra M. (ed.), Szkoły wyższe i ich finanse w 2015 roku, Główny Urząd Statystyczny (Central Statistical Office), Warszawa 2016, p.27.)

The biggest Polish higher schools are public universities, including the biggest one – University of Warsaw, educating 44,8 thousand students and Warsaw University of Technology, educating 33,4 thousand students. Over 243 thousand students were learning at Warsaw higher schools in the academic year 2015/2016 which equalled 17,3% of the total number of students at Polish higher schools. Worth noticing is the fact that students coming from the country equal one third of the total number of students, whereas 40% of Polish population live in the country.

Analysis of undergraduates number according to study forms and sex reveals that public schools are dominating ones (almost 1,1 million of people) and full-time studies (almost twice as many as part-time studies). Women dominate in the total number of undergraduates – Table 1.

Table 1: Undergraduates according to study forms

	In general	Women therein	Undergraduates			
			Full-time		Part-time	
			Total	Women therein	Total	Women therein
In general	1405 133	811 378	918 952	535 240	486 181	276 138
Public higher schools	1075 199	611 668	838 651	488 158	236 546	123 510
Non-public higher schools	329 934	199 710	80 301	47 082	249 633	152 628

(Source: Żyra M.(ed.), *Szkoły wyższe i ich finanse w 2015 roku*, Główny Urząd Statystyczny (Central Statistical Office), Warszawa 2016, p.29.)

Significant increase in the number of undergraduates after 1990 is responsible for the rise of the Net and Gross Enrolment Ratios – Table 2.

Table 2: Enrolment Ratios in higher education

Enrolment Ratio (%)	1990/1991	1995/1996	2000/2001	2005/2006	2010/2011	2011/2012	2012/2013	2013/2014	2014/2015	2015/2016
Gross	12,9	22,9	40,7	48,9	53,8	53,1	51,8	49,2	48,1	47,6
Net	9,8	17,2	30,6	38,0	40,8	40,6	40,2	38,6	37,8	37,3

without foreign students. Before 2005/2006 without external students.

(Source: Żyra M.(ed.), *Szkoły wyższe i ich finanse w 2015 roku*, Główny Urząd Statystyczny (Central Statistical Office), Warszawa 2016, p.28.)

Undergraduate and school numbers forecasts

With reference to demographic forecast indicating a dramatic drop of young people number in Poland (the number of nineteen-year-olds is going to be lower by 48% in comparison to the peak year 2002 and by 32% than in the year 2010) there should be posed a question of what influence the mentioned changes will have on higher education market. Although demographic decline is not the only factor forming demand for higher education, it seems to be crucial (particularly for the full-time undergraduates) at least by setting the limits on the internal human resources.

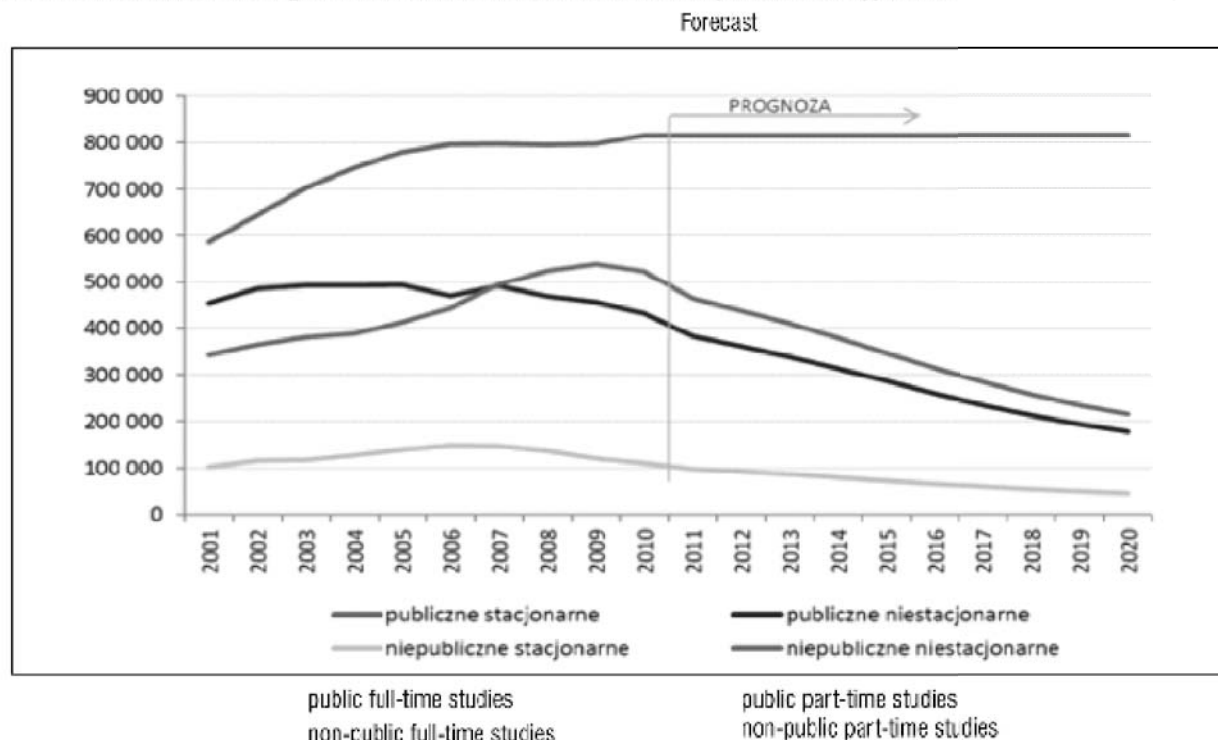
The forecast of undergraduate number till 2020 is, among others, presented by the authors of Socrates Institute Report relating the influence of demographic changes on higher education till 2020¹. Analysing the phenomenon and measuring the forecast, the authors assume maintaining Gross Enrolment Ratio on the current level of 54%².

(¹D. Antonowicz, B. Gorlewski, *Demograficzne Tsunami. Raport instytutu Sokratesa na temat wpływu zmian demograficznych na szkolnictwo wyższe do 2020 roku*, Instytut Rozwoju Kapitału Intelektualnego im. Sokratesa, Warszawa 2011.

(²Gross Enrolment Ratio – total enrolment within a country in a specific level of education, expressed as a percentage of the population in the official age group corresponding to this level of education.)

Moreover, the authors have prepared the forecast variants. Variant A presumes public full-time studies as the first choice studies and therefore the number of students should not decrease and remain on the 2010 level

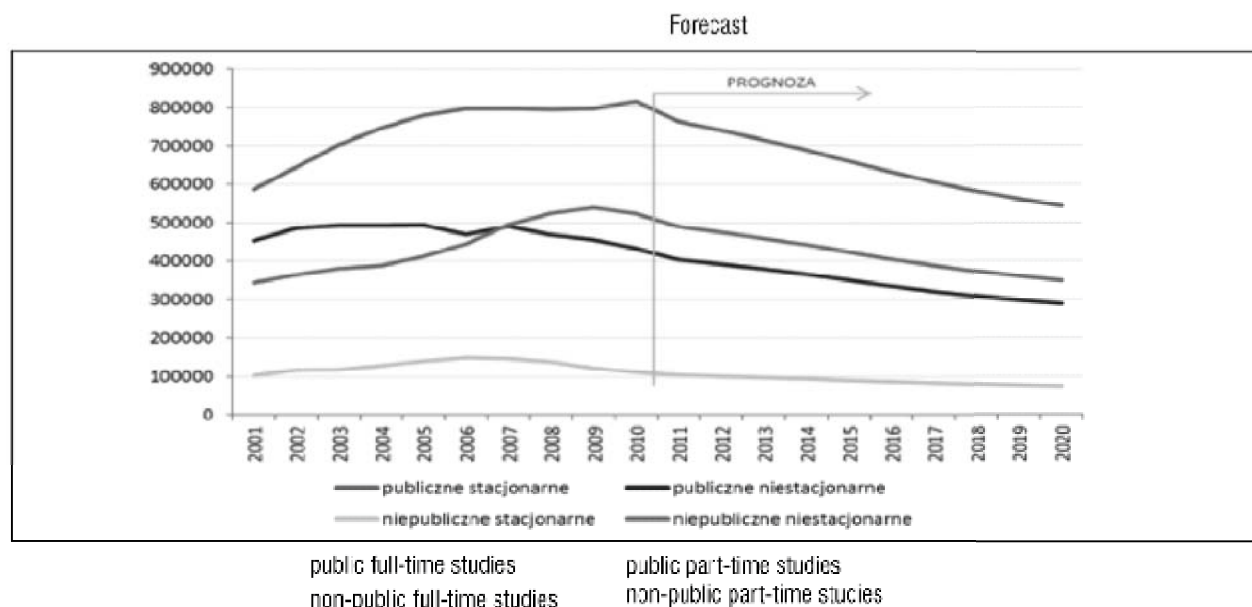
Figure 4: The forecast of undergraduates number in accordance to study and school type for the years 2011-2020 (Variant A)



(Source: D. Antonowicz, B. Gorlewski, *Demograficzne Tsunami. Raport Instytutu Sokratesa na temat wpływu zmian demograficznych na szkolnictwo wyższe do 2020 roku.*)

Variant B presumes the proportions of student numbers according to the study and school type will remain the same and thus demographic decline will affect all groups of undergraduates in the same way –Figure 5.

Figure 5: The forecast of undergraduates number in accordance to study and school type for the years 2011-2020 (Variant B)

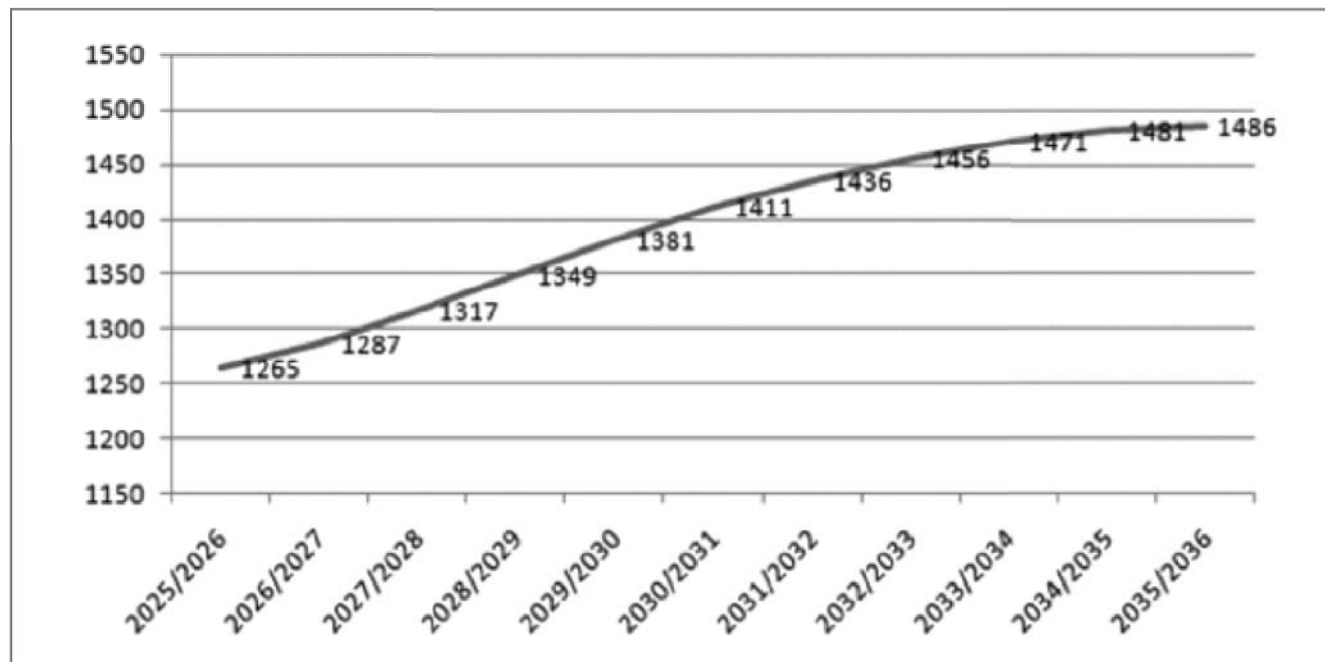


(Source: D. Antonowicz, B. Gorlewski, *Demograficzne Tsunami. Raport Instytutu Sokratesa na temat wpływu zmian demograficznych na szkolnictwo wyższe do 2020 roku.*)

Variant A shows that results of demographic decline will mainly hurt the paid, non-public higher education sector, whereas variant B assumes that the effect will be equally distributed which could actually happen only if there was not further division into paid and non-paid studies which seems rather unlikely.

No matter the variant, undoubtedly the number of undergraduates will keep decreasing and, according to forecasts, will only start to rise after the year 2025 – Figure 6, what must result in closing many higher schools, mainly non-public ones.

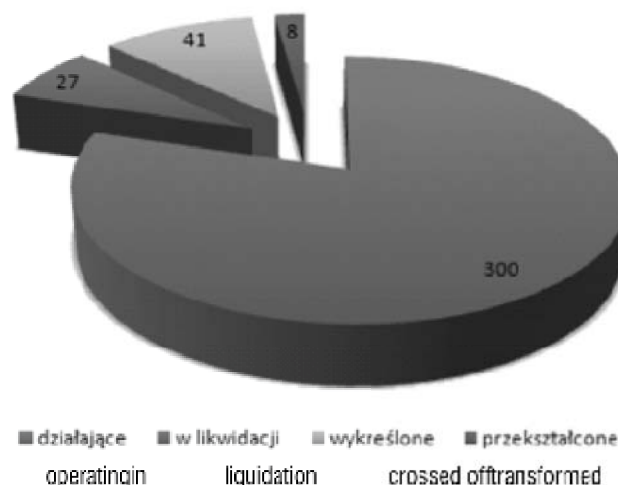
Figure 6: General number of undergraduates in years 2025-2036 (in the thousands)



(Source: http://www.nauka.gov.pl/g2/original/2013_070695136d37bd577c8ab03acc5c59a1f6.pdf)

According Higher Education Information System in Poland, of 376 non-public higher schools 27 are currently being liquidated, 41 have already been crossed off the list (Figure 7) and the process will probably go further. As Polish Confederation of Private Employers "Lewiatan" estimates, in 2025 there will be no more than 50 non-public higher schools³.

Figure 7: Non-public higher schools in Poland



(Source: <https://polon.nauka.gov.pl/opi/aa/rejestrzy/run?execution=ets1>)

Taking into consideration the forecasts revealing a significant drop in undergraduates number till 2025 as well as analysing higher schools external environment, there appears a bigger than current need for marketing oriented management.

Marketing management of higher school.

A dynamic development of educational services on university level and marketing activity of higher schools, mainly the private ones, have made it necessary to change the current management orientation for the market oriented.

For the sake of the following article we follow a marketing definition by Jerzy Dietl which states that it is a management process directed at possibly constant acquisition of clients, particularly the final buyers, obtained through anticipation, identification and fulfilment of needs and demands, which enables gaining the competitive advantage and is oriented on achieving the growth of market value of organisation in the long term"⁴.

(⁴<http://www.edulider.pl/edukacja/kryzys-uczelni-wyzszych-jak-reagowac-na-niz-demograficzny> [access: 1.12.2016])

⁴J. Dietl, *Czy potrzebne jest zarządzanie marketingowe w szkolnictwie wyższym?* [in:] G. Nowaczyk, M. Kołasiński (ed.), *Marketing szkół wyższych*, Wydawnictwo Wyższej Szkoły Bankowej w Poznaniu, Poznań 2004, p. 14.)

Development of a competition between public and non-public higher schools is a challenge to the change in their strategy and method of operation.

Market and competition have thus become important factors verifying higher school activities in the areas of obtaining their didactic, scientific and financial aims. Such conditions have set the spheres of competition between both, public and non-public schools which have started their rivalry to obtain

- candidates for their courses
- external funding for their statutory aims
- financing their scientific researches
- didactic and scientific staff
- sponsors
- international cooperation⁵.

Higher schools offer a service type product with all its consequences such as: intangibility, inseparability, diversity and impermanence. Due to that, their offers do not follow standardising and can have unique, individual features making them stand out in the market. It also means that schools' external

features such as faculty names, specialities or syllabus contents are not sufficient elements differentiating them in the market. These external features should be treated as a core product which characterises main, basic function of educational offer. Additional features of the offer, i.e. the elements of the extended or potential product, have become the client choice factors.

Undoubtedly, factors influencing the school choice are changing which results from the full information about the competing schools' offers, as well as from rising demand in service quality which consequently will enable a degree recognition and job acquisition. To make it actually happen, there occurs a necessity for systematic research of the environment (both, the closer and the further one) with the use of stated procedures (e.g. market segmentation and school positioning), redefining of the final client notion (apart from the undergraduate, also the potential employer) and assuming the concept of target market as the starting point in defining the vision and mission.

Higher school offer features which allow school differentiation and identification establish marketing management rules in the range of

- forming and promoting school image;
- building partner relations in social and economic environment (affiliate marketing);
- creating efficient marketing communication channels⁶.

(⁵ *Ibid*, p. 53.

⁶ *Ibid*, p. 53.)

The mentioned above rationale behind marketing orientation and unfavourable demographic forecast have forced the need for new approach in functioning of the two Copper Basin local higher schools located in their direct neighbourhood (about 15 km) and building their partnering relationship.

Relationship marketing consists in keeping the relation among the market participants and in case of higher school it is reflected in the form of partnership chain which creates the net of links among the school founders, its authorities, its staff and students and their common undertakings etc. Marketing communication and Public Relations are important instruments in such partnership and are responsible for creating favourable atmosphere for the coming consolidating activities.

Although higher education market is theoretically autonomous, it is the subject to many legal regulations in fact.

Legal conditioning of higher schools consolidation in Poland

In order to analyse the chosen legal aspects of higher schools

consolidation one needs to define some basic concepts. The notion of higher school has quite a multi-aspect character. From the Polish law viewpoint it has been defined in Act of Higher Education Law of 2005 (further referred: PSW Act). In the meaning of the act article 2, paragraph 1, point 1, a higher school is defined as a school running higher education courses and which has been founded accordingly to the act. The legislator sets two types of higher schools: public and non-public ones. Such a dichotomy has a crucial role as far as the consolidating processes in higher school sector in Poland is concerned. According to the legislator, a public school is the one founded by the state, represented by the proper authority unit or public administration unit (article 2 paragraph 1 point 2 of PSW Act). On the other hand, a non-public school is the one founded by an individual or legal entity who are not state or local self-government entity (article 2 paragraph 1 point 3 of PSW Act). The only criteria of differentiation stated by the legislator refers to the founding body. Consequently, legal status of the founding entity determines the legal character of the founded school. PSW Act does not apply to higher schools and seminaries run by churches and religious associations (article 1 paragraph 2 of PSW Act) which means they are actually not the element of higher education system. The only exception has been made for Catholic University of Lublin. It is also acceptable that another act or agreement between the government and the churches or religious associations will contain separate regulations differing from generally accepted rules.

Polish higher education system functions as a uniform model which reflects the formula stated in the so called Bologna process. It consists of three levels present in higher education system⁸. The higher education system can be understood as all institutional and financial conditions created by the state in order to realise its constitutional principle of the right to education⁹.

(⁷ The Act of July 25, 2005 – Higher Education Law (Journal of Laws from 2016, item 1842, consolidated act from November 15, 2016.)

⁸ More on the subject: A. Kraśniewski, *Jak przygotować program kształcenia zgodnie z wymaganiami Krajowych Ram Kwalifikacji dla Szkolnictwa Wyższego*, Warszawa 2000.)

It refers to article 70 of Constitution of the Republic of Poland¹⁰ which decrees the right to education without specifying the method of execution. In the literature, the right to education is assumed as the element of widely understood cultural and academic rights¹¹.

The current PSW Act has unified the conditions for creating and organising the entities offering educational services on higher

level, of no matter their public or non-public status. However, one can hardly agree that these groups of entities have the same rights and duties in the higher education sphere¹². It is enough to mention that units founded by public entities obtain state subsidies for their operation whereas non-public ones, although theoretically they can obtain such means from the state, actually do not receive such support, except for some incidental cases. In the same time, privately founded schools in the educational system receive public subsidies in relation to the number of pupils they educate. According to the authors, the factual lack of financing the non-public higher schools from the state budget violates the principle of convergence of public and non-public sectors in higher education understood as a pursuit of ensuring equality in treating and competition between public and non-public higher schools.

It is quite valuable to examine the required conditions for founding the higher school in order to analyse the issue of higher schools consolidation because regulations referring to school mergers are applied *per analogiam*. Two necessary premises – a formal one and a material one – must be fulfilled in order to found a higher school. The formal premise is setting up a unit in accordance with the normative procedure for a given type of entity. There are possible three options for setting up a school. The first option, which is close to the concession system, requires obtaining formal approval before starting operations. In the second option, in case of public academic school a passing of an act by parliament is required. In the third option, referring to public vocational higher schools, a permission is required in the form of the relevant minister regulation (most often Minister of Higher Education). It needs to be stressed that non-public higher school can only be founded on the basis of Minister of Higher Education permit following the application by an entitled entity. In legal terms, the permission is an administrative decision issued in the mode of general administrative proceedings. The second required premise – the material one – is running operations which can be described as higher study courses. Thus the name of a higher school is restricted only to an entity which possesses an adequate permission for running first cycle, second cycle or long-cycle magister studies and runs the mentioned studies in a continuous way¹³.

Differentiation of higher schools operating in Poland makes it difficult to analyse them in respect of consolidation variants. Due to their legal character, merging non-public higher schools theoretically should not

(⁹R. Biskup, *Comment to article 1, [in:] Prawo o szkolnictwie*

wyższym. *Comment, M. Pyter (ed.), Warszawa 2012.*

¹⁶*Constitution of the Republic of Poland from April 2, 1997 (Journal of Laws from 1997, No 78, item 483, as amended)*

¹⁷*More on the subject: J. Sozański, Prawa człowieka w systemach prawnych Wspólnot i Unii Europejskiej, Poznań 2008.*

¹⁸*In other words: R. Biskup, Comment to article 1, [in:] Prawo o szkolnictwie wyższym. Komentarz., M. Pyter (ed.), Warszawa 2012, p. 10.*

¹⁹*R. Biskup, Comment to article 2, [in:] Prawo o szkolnictwie wyższym. Komentarz., M. Pyter (ed.), Warszawa 2012, p. 23-24.)*

present any major problems. It looks similar in case of public schools. However, direct merger of public and non-public higher schools is not possible. It is related to the characteristics of such organisations understood as specific legal entities of different origins. The beginning of legal entity for the non-public higher school is set on the date of signing it in the legal register run by the minister responsible for educational issues. The public higher school obtains its legal entity with the date of the entry into force of its founding act.

According to the article 4 paragraph 1 of PSW Act, higher schools are autonomous in all aspects of their operations on terms stated in the act¹⁴. Decisions related to higher school can be made by units of government or local self-government administration only in cases defined in the act (article 4 paragraph 5 of PSW Act). In spite of the fact that the legislator directly declares schools autonomy, there can be pointed out a lot of areas of schools functioning which clearly undergo some controlling (e.g. Krajowe Ramy Kwalifikacji – National Qualifications Framework, staff minimum requirements etc.). From the consolidation viewpoint, higher schools cannot make the merger decisions themselves. The founding entities activity is necessary in that range of operation. However, schools are free to realise common didactic or scientific activities. Legally speaking, such school co-operations are called school partnerships which can function on the basis of either named or unnamed agreements.

The legislator does not indicate directly whether a higher school can be defined as an entrepreneur in the meaning of article 4 of the act of free economic activity¹⁵. It has been well established in the relevant literature that due to the lack of clear restriction, as well due to higher school legal form, it can be qualified as an entrepreneur as long as it does business operations¹⁶. It seems that higher school which does not do any business activity can also be named entrepreneur. Otherwise, it would be difficult to talk of the possibility of purchasing the entire school or elements of its

possessions. Apart from that, although a higher school does not have to be listed in National Court Register (KRS), listing in the non-public school register and non-public higher school association has a constitutional character. In other words, the higher school cannot legally start its functioning without the mentioned above registration. Both public registers – KRS and higher schools register – indicate equivalent legal consequences in the range related to legal entity of units mentioned in them.

A different case is possibility creating by higher school a special purpose vehicle (either stock or limited liability company). The range of operations of such a company refers to taking over shares in capital companies or setting up capital companies which deal with scientific research or development work commercialisation (article 86, 86a-c of PSW Act). A higher school is also allowed to run economic activity in the range and form stated in its statute (article 7 of PSW Act). A higher school may also set up other forms of legal entities such as foundations or associations. It needs to be stressed that higher schools are somehow privileged in running their economic operations by setting quite wide objective limitations on their activities. It enables them not to comply with the legal regimes for entrepreneurs and, among others, take advantage of widely set tax freedom.

¹⁴*Compare: Constitutional Tribunal sentence of November 8, 2000 (SK 18/99, OTK 2000, no 7, item 256)*

¹⁵*The Act of July 2, 2004 of free economic activity (consolidated: Journal of laws from 2016, item 1829)*

¹⁶*R. Biskup, Comment to article 2, [in:] Prawo o szkolnictwie wyższym. Comment, M. Pyter (ed.), Warszawa 2012, p. 26.)*

The legislator predicts a lot of regulations relating to higher school liquidation. Unfortunately, consolidation issues are seen in rather narrow scope. According to article 19 paragraph 6 of PSW Act the regulations apply in case of merging one public higher school with another public one. Similar regulations, expressed in article 26 paragraph 3 and 4 of PSW Act, refer to non-public higher schools. In accordance with these regulations the minister relevant for higher education issues, following the application of the person who received the permission for setting up a higher school, can transfer this permission to another individual or legal entity on condition that they accept all terms mentioned in the permission. The transition is executed on the basis of administrative decision which means it undergoes regulations stated in Code of Administrative Proceedings. Additionally, there cannot occur premises excluding minister's permission mentioned in article 20 paragraph 5 and 6 of PSW Act. These

refer to the mandatory minister's refusal for permission for individuals who 1) have been sentenced with the final judgement for deliberate crimes; 2) have been listed as insolvent debtors in National Court Register; 3) have due liabilities to the State Treasury. Similar restrictions refer to legal entities applying for permission transfer. The negative premises include 1) entities in liquidation or 2) in bankruptcy; 3) being listed as a debtor in National Court Register; 4) having due liabilities to the State Treasury; 5) if any of the negative premises related to individuals refers to any person entitled to represent the entity.

As far as merging and taking over of non-public higher schools is concerned, the legislator remains silent. Regulations appear as late as at the moment of submitting an application for transition of permission. For the lack of regulations referring to valuation of particular components of material assets of the school being taken over, including the rights to run the faculties, it is necessary to follow the commercial entities practice. Thus components of school assets are valued similarly to any components of entrepreneur's assets.

It needs to be underlined that the legislator predicts the possibility of higher school merger in a bipolar way. A public higher school can be merged with other public school and a non-public school can be merged with another non-public school. Considering such construction of the act it must be concluded that the legislator did not mean to create the possibility to join public higher schools with non-public ones. The lack of regulations in that aspect should be judged negatively. In the context of problems related mostly to demographic decline mentioned above, there appears a need for higher schools of lower potential to merge with the stronger ones. Once it is assumed that higher schools constitute an important element of social life, their formal status should not matter. What is important is to ensure the possibility of development for the region and to satisfy its inhabitants educational needs. Legal possibility of joining public and non-public higher schools would enable faster adjustment of the higher school structure to dynamic changes occurring in higher education services market.

The example of Uczelnia Jana Wyżykowskiego consolidation

(¹⁷ The act of June, 1960 - the Code of Administrative Proceedings (consolidated text Journal of Laws from 2016 items 23, 868, 996, 1579).)

The merger of Lower Silesia University of Entrepreneurship and Technology (DWSPiT) and Copper Region Professional College (UZZM) is the example of a successful consolidation. It was the result of tightening cooperation which lasted for a few years, and

which found its formal expression in signing the agreement of consortium in the scope of scientific research, publications, staff exchange and funds acquisition in the middle of 2015¹⁸. Under this agreement, there was organised a common scientific conference: "Technical sciences and industrial practice in Copper Basin region".

A few month long negotiations, which aimed at working out legal and organisational formula for the merger, preceded positive decisions of both schools founders. External communication plan of the undertaken operation was an important aspect of the talks. Due to the lack of models and wider legal regulations there was developed an own consolidation way which a year after receiving the agreement for a merger on general succession basis can be called a success.

In late November 2015, both higher school senates conducted the procedure of pronouncing opinion on consolidation and naming the new school with the name of Jan Wyżykowski – a discoverer of Polish copper layers and a region civilizational development pioneer. There was also obtained a formal written acceptance by Jan Wyżykowski family. From the project support point of view, it was a significant moment as full representation of academic society was present¹⁹.

Acting on the basis of regulation article 25, article 25 a, article 30 and 84 of PSW Act, on 30th November 2015 both higher school chancellors and their representatives addressed the minister relevant for higher education issues with the formal application for school merge executed in the form of including Copper Region Professional College of Lubin in Lower Silesia Higher School of Entrepreneurship and Technology of Polkowice on 1st January 2016. The application contained several dozens of appendixes of legal acts and statements. At the same time, there was made a request to remove UZZM in Lubin from the register of non-public higher schools and non-public school associations.

DWSPiT acted on the basis of Minister of Higher Education decision of 30 August 2001²⁰ which granted the founder, i.e. ZAMPOL Ltd. based in Polkowice²¹, a permission to set up a non-public vocational higher school. The school was based in Polkowice. UZZM in Lubin²² was set up by RCE Ltd. on 22 December 2001²³.

(¹⁸ The consortium agreement from May 25, 2015 between DWSPiT in Polkowice and UZZM in Lubin. UJNArchives.

¹⁹ For example, DWSPiT senate included representatives of academic teachers, non-academic workers and students.

²⁰ The school founded on the basis of the Minister of National

Education Decision from 30 August 2001, signature: DSW-3-0145-787/Eko/2001 with later changes.; Listed in the register of non-public higher schools and non-public school associations under position '231'.

²¹*ZAMPOL Ltd. is a commercial company of which 99% of shares belong to Polkowice borough and 1% to Polkowice district. The share capital on 12 October 2015 equalled 1 214 400 PLN. The company is listed in the National Court Register under position 0000320885.*

²²*The school founded on the basis of the Minister of National Education and Sport Decision from 22 December 2001, signature: DSW-3-0145-1225/Eko/2001 with later changes.; Listed in the register of non-public higher schools and non-public school associations under position '232'.)*

It was argued that the merger will enable one entity to create a wide and attractive educational offer and will make it easier to realise both schools' strategic goals such as provision of high quality education and scientific research directed to widely understood labour market as well as educating graduates who will possess knowledge, skill and social competence desired on the labour market. Possessing a long time experience in higher school management, the merging schools will be able to excel their management standards on the basis of their good practice in each of the subjects. Another argument in favour of the merger was a shrinking number of undergraduates. At that moment there were about 800 undergraduates in Lubin and about 400 ones in Polkowice. What is more, the proportion of fixed cost in general cost structure is quite high for higher schools. In case of demographic decline, when the fixed cost level comes close to the level of tuition fee income, non-public higher schools have to rationally economise their financial means. Joining a neighbouring UZZM to DWSPiT resulted in facilitating the finance management process of the new entity.

The minister approved the application issuing a formal administrative decision on 21 January 2016 on the basis of article 25 and 25a, in relation to article 30 of PSW Act and on the basis of article 104 § 1 of Code of Administrative Proceedings allowing the merge through incorporating UZZM in Lubin into DWSPiT in Polkowice on 1 January 2016. In the result, UZZM employees and undergraduates became the employees and undergraduates of DWSPiT in Polkowice. DWSPiT also took over all material means and other rights and liabilities of the former Lubin based higher school. The UZZM rights to run the academic courses on the specified faculty, level and education profile were vested to relevant DWSPiT basic organisational units. Due to the

fact that minister's decision approved the parties request in its full form, on the basis of article 107 § 7 of Code of Administrative Proceedings there was no need to present the reasons for the decision.

In the result of consolidation and re-branding, there was formed a strong higher school of regional range which is authorised to educate in 10 directions and 3 faculties. Two faculties, Social Sciences Faculty and Technical Faculty were located in Polkowice, and one – Branch Faculty - was located in Lubin. The location of offered directions was also adjusted to the new concept of Uczelnia Jana Wyżykowskiego operation mode.

Apart from technical and organisational challenge in fields of accountancy, payroll and deanery issues integration, there should be noted a lot of activities conducted in the sphere of unification of procedures and document circulation. It was particularly difficult to persuade the future stakeholders that UJW is not a completely new entity on Lower Silesia map but a direct continuator of the two smaller higher schools. The issue resulted from the fact that the introduced change had a double aspect. One was that the two schools merged and another was that they took a new name. The scale of change can be assessed as quite risky from the marketing viewpoint. However, DWSPiT authorities assumed that internal and external communication of both changes will bring additional marketing effect to the enterprise. A detailed plan of informing about consolidation (including a new UJW visual

⁽²³⁾*In order to take over UZZM, DWSPiT had to buy out the UZZM shares in its founding company, i.e. RCE Ltd. It conducted on the basis of notarial act.)*

identification system) was prepared within the communication plan which was conducted in the year long term. It was divided into 2 stages: information stage directed to the wide range of receivers, and promotional stage – meant as a presentation of a new UJW educational offer. There were not reported any difficulties while carrying out the communication plan.

The enrolment results for the year 2016/2017 have proved the positive effect of consolidation. UJW has maintained its *status quo* which, having in the mind the falling number of undergraduate candidates in Poland, can only be seen as success. A widely spread marketing campaign has allowed to obtain the set marketing goals. The campaign, as the only one of that type, has received a distinction at "ProMYKI" competition run by the Polish Higher Schools Promotion and PR Association in 2016.

Summary

Educational boom of the 90s. is a Polish phenomenon. In the coming years the number of undergraduates will keep falling and will start rising no sooner than after 2025. Consequently, a lot of higher schools, mainly non-public ones, will be liquidated. Higher schools consolidation is a relatively new phenomenon in Poland and due to demographic decline it will grow. The legislation lags behind the market needs though. Although it is legally possible to merge two public higher schools and analogically two non-public ones, PSW Act does not provide the mode for joining a public higher school with a non-public school. Because of the lack of relevant regulations, merging non-public higher schools requires application of laws known to the entrepreneurs. Consolidation of two Lower Silesian higher schools, DWSPiT in Polkowice and UZZM in Lubin, can be an example of a good practice. The process may be conducted quite successfully on condition that it has a well-prepared consolidation communication plan. One of the key elements of marketing management is the research of external environment in which the higher schools operate.

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Impact of Working Capital Management on Firm Profitability: Empirical Evidence of the Bombay Stock Exchange Sensex Companies

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Abstract

Purpose: The paper aims at examining the relationship between working capital management and firm profitability. Taking working capital ratios and profitability ratios as proxies of working capital management and firm profitability respectively, the paper offers new insights into the aforesaid relationship.

Design/ Methodology/ Approach : An empirical study of companies included in Bombay Stock Exchange Sensex was conducted. The secondary data relating to the companies were taken from CAPITALINE database. The time period covered for the study was from 2012 to 2015. A multiple stepwise regression method was used to examine the relationship between working capital ratios and profitability ratios.

Findings: The study reveals that only current ratio is statistically significant while explaining variation in Return on Capital Employed (ROCE) and Return on Net Worth (RONW). The other working capital ratios were found to be statistically insignificant. Surprisingly, the total assets and long term to debt ratio used to control the firm size and debt level were also found to be statistically significantly related to ROCE.

Implications: The study implies that current ratio is the only significant predictor of change in ROCE and RONW among the select working capital ratios. It will thus imply that managers will do well focusing more on current ratio while managing their working capital requirements effectively.

Keywords: Working capital management, ROCE, RONW, Current ratio, Profitability

Introduction

Working capital management is a very demanding and challenging task for any finance manager. The solvency of the company will be jeopardized unless it manages its current assets and liabilities efficiently. The working capital management thus requires manager match current assets against current liabilities in a manner that it will not threaten the liquidity of the firm and will generate cash to meet short term obligation smoothly. Working

capital management comprises of management of current assets and liabilities. It has to achieve twin objectives simultaneously viz profitability and liquidity. A company needs to invest adequate amount of funds in current assets to ensure timely honoring of short term obligations thus, maintaining enough liquidity. On the contrary, excess investment in working capital reduces the chances of earning profits which otherwise, would have been earned by investing surplus cash in profitable investment opportunities. The efficient working capital management thus, calls for a trade-off between liquidity and profitability.

In the following pages the relationship between working capital management and profitability is empirically explored with respect to BSE Sensex companies.

The paper is organized as follows. The second section discusses the literature review, the third section presents research methodology, fourth section presents results and discussion and lastly, the fifth section offers findings and conclusion.

Literature review

Chatterjee (2010) analyzed the impact of working capital management on the profitability of listed companies in the London Stock Exchange. He found a negative relationship between cash conversion cycle and profitability. He also reported a negative significant relationship between debt used by the firm and its profitability.

Chatterjee (2012) took a sample of 100 Indian companies to analyze the impact of working capital on the profitability during a two year period 2010-11. He found a strong negative association between the components of working capital management and the profitability ratios of the Indian firms. Moreover, he also found a negative relationship between the debt and the profitability of these firms.

Thuvakaran (2013) taking a sample of 60 UK manufacturing companies examined the relationship between working capital management and profitability. His results indicated that there was no significant relationship between the working capital components and profitability. He also found a negative

relationship between gearing and profitability of manufacturing firms.

Enqvist, Graham, and Nikkinen (2013) examined the role of business cycles on the working capital-profitability relationship using a sample of Finnish listed companies over an 18 year period. Their results demonstrated that active working capital management did matter and hence should be included in firm's financial planning.

Panigrahi (2013) investigated the relationship between inventory management and profitability taking a sample of five top Indian cement companies over a period of ten years from 2001-2010. The results of his study indicated that there was a significant linear relationship between inventory conversion period and profitability. He also found a negative relationship between firm profitability and financial debt ratio.

Gamlath and Yogendrarajah (2014) analyzed the effect of working capital on profitability in the context of listed commercial banks in Sri Lanka. They found a significant impact of working capital management on profitability of Sri Lankan commercial banks.

Research Methodology

The research design used in this study is descriptive and analytical. The paper aims at analyzing the relationship between working capital ratios on firm profitability.

Data and Sample

The study comprises of the companies included in the Bombay Stock Exchange Sensex Index. The study covers the time period of four years ranging from 2012 to 2015. All financial data relating to the sample companies were culled from CAPITALINE database.

Variables

• Independent variables

Current ratio, inventory turnover ratio, debtor turnover, interest cover ratio, long term debt to equity ratio, debt equity ratio and total asset were taken independent variables.

• Dependent variables

ROCE and RONW were taken as dependent variables. A stepwise multiple regression analysis was used to examine the relationship between independent and dependent variables.

Hypotheses

H₁: There is no significant relationship between working capital ratios and ROCE.

H₂: There is no significant relationship between working capital ratios and RONW.

Model Specification

Two multiple regression model were used to test the aforesaid hypotheses.

Model 1: $ROCE_t = \beta_0 + \beta_1 \text{Debt Equity ratio}_t + \beta_2 \text{Current ratio}_t + \beta_3 \text{Inventory Turnover}_t + \beta_4 \text{Debtor Turnover}_t + \beta_5 \text{Interest Cover ratio}_t + \beta_6 \text{Long term debt Equity ratio}_t + \beta_7 \text{Total Assets}_t$

Model 2: $RONW_t = \beta_0 + \beta_1 \text{Debt Equity ratio}_t + \beta_2 \text{Current ratio}_t + \beta_3 \text{Inventory Turnover}_t + \beta_4 \text{Debtor Turnover}_t + \beta_5 \text{Interest Cover ratio}_t + \beta_6 \text{Long term debt Equity ratio}_t + \beta_7 \text{Total Assets}_t$

In above models, subscript *i* indicates *i*th firm and *t* time period for sample companies.

Results and Discussion

In order to test the first hypothesis, as specified earlier regression model #1 was tested. Table 1 presents the model summary of it. It is quite evident from the table that the pooled correlation between ROCE and significant independent variables was .483. A stepwise regression model allowed only three independent variables to be entered into the model that were total assets, current ratio and long term debt to equity ratio.

Table 1: Model Summary^a

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.379 ^a	.144	.136	22.39376	
2	.431 ^a	.186	.171	21.93483	
3	.483 ^a	.234	.213	21.37609	.684

a. Predictors: (Constant), TOTAL_ASSETS

b. Predictors: (Constant), TOTAL_ASSETS, CURRENT_RATIO

c. Predictors: (Constant), TOTAL_ASSETS, CURRENT_RATIO, LONG_TERM_DEBT_EQUITY_RATIO

d. Dependent Variable: ROCE

Table 2 represents the ANOVA results of model #1. The model inclusive of total assets, current ratio and long term debt to equity ratio as independent variables was found to be statistically well fitted ($F = 11.271, p < 0.05$).

Table 2 ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9503.766	1	9503.766	18.951	.000 ^b
	Residual	56387.318	113	501.481		
	Total	66171.084	114			
2	Regression	12283.781	2	6141.890	12.765	.000 ^c
	Residual	53387.304	112	481.137		
	Total	66171.084	114			
3	Regression	15451.070	3	5150.357	11.271	.000 ^d
	Residual	50720.015	111	456.937		
	Total	66171.084	114			

a. Dependent Variable: ROCE

b. Predictors: (Constant), TOTAL_ASSETS

c. Predictors: (Constant), TOTAL_ASSETS, CURRENT_RATIO

d. Predictors: (Constant), TOTAL_ASSETS, CURRENT_RATIO, LONG_TERM_DEBT_EQUITY_RATIO

Table 3 Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	29.035	2.315		12.542	.000
	TOTAL_ASSETS	-2.950E-05	.000	-.379	-4.353	.000
2	(Constant)	20.945	4.058		5.161	.000
	TOTAL_ASSETS	-2.235E-05	.000	-.287	-3.073	.003
	CURRENT_RATIO	5.713	2.377	.225	2.404	.018
3	(Constant)	22.265	3.986		5.585	.000
	TOTAL_ASSETS	-2.197E-05	.000	-.282	-3.099	.002
	CURRENT_RATIO	6.264	2.325	.246	2.694	.008
	LONG_TERM_DEBT_EQUITY_RATIO	-9.268	3.520	-.220	-2.633	.010

a. Dependent Variable: ROCE

Table 3 highlights the results of t test which was used to examine the relative significance of individual independent variable. The results of t test suggested that total assets and long term to equity ratio were statistically negatively related with ROCE (t= -3.099, p<0.05, t= -2.633, p<0.05) respectively. On the other hand, current ratio seemed to have statistically significant relationship with ROCE (t= 2.694, p<0.05).

Table 4 depicts the results of excluded variables.

Table 4 Excluded Variables^a

Model		Beta In	t	Sig.
1	DEBT_EQUITY_RATIO	-.177 ^a	-2.066	.041
	CURRENT_RATIO	.225 ^a	2.404	.018
	INVENTORY_TURNOVER	.037 ^a	.417	.677
	DEBTORS_TURNVOER	.033 ^a	.374	.709
	INTEREST_COVER_RATIO	.022 ^a	.250	.803
	LONG_TERM_DEBT_EQUITY_RATIO	-.199 ^a	-2.336	.021
2	DEBT_EQUITY_RATIO	-.203 ^a	-2.421	.017
	INVENTORY_TURNOVER	.046 ^a	.531	.596
	DEBTORS_TURNVOER	.005 ^a	.058	.954
	INTEREST_COVER_RATIO	.019 ^a	.223	.824
	LONG_TERM_DEBT_EQUITY_RATIO	-.220 ^a	-2.633	.010
3	DEBT_EQUITY_RATIO	.440 ^a	.918	.361
	INVENTORY_TURNOVER	.036 ^a	.429	.668
	DEBTORS_TURNVOER	-.004 ^a	-.046	.963
	INTEREST_COVER_RATIO	.006 ^a	.070	.945

The results of regression model #2 are shown in Table 5. The results indicates that only current ratio is only explanatory variable that explains 4.6% variation in RONW (R square = 0.046).

Table 5: Model Summary^a

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.215 ^a	.046	.038	20.76093

a. Predictors: (Constant), CURRENT_RATIO

b. Dependent Variable: RONW

In order to test the overall statistical significance of the regression model, F test was used. The results of which are presented in table 6. The results showed that the regression model with current ratio as the only significant variable is well fitted ($F = 5.481, p < 0.05$).

Table 6 ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2362.338	1	2362.338	5.481	.021 ^a
	Residual	48704.842	113	431.016		
	Total	51067.180	114			

a. Predictors: (Constant), CURRENT_RATIO

b. Dependent Variable: RONW

A student t test was used to analyze the statistical significance of each independent variable. The results of t test are shown in Table 7. The results highlight that current ratio is the only independent variable that is statistically significantly related to RONW ($t = 2.341, p < 0.05$). Table 8 presents the results of excluded independent variables that failed to enter into the regression model. The results of correlation between individual independent variable with individual dependent variable-ROCE and RONW are presented in table 9. Current ratio was found to be significantly positively correlated with ROCE and RONW ($r = 0.342, p < 0.05, r = 0.215, p < 0.05$) respectively. Long term debt to equity ratio was significantly negatively correlated with ROCE ($r = -0.193, p < 0.05$). Total assets were significantly negatively correlated with ROCE and RONW ($r = -0.379, p < 0.05, r = -0.207, p < 0.05$).

Table 7 Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	18.666	3.184		5.862	.000
	CURRENT_RATIO	4.806	2.053	.215	2.341	.021

a. Dependent Variable: RONW

Table 8: Excluded Variables^a

Model	Beta In	t	Sig.
DEBT_EQUITY_RATIO	-.137 ^a	-1.495	.138
INVENTORY_TURNOVER	.020 ^a	.218	.828
DEBTORS_TURNVOER	.055 ^a	.568	.558
INTEREST_COVER_RATIO	-.014 ^a	-.148	.883
LONG_TERM_DEBT_EQUITY_RATIO	-.118 ^a	-1.612	.110
TOTAL_ASSETS	-.142 ^a	-1.422	.158

a. Dependent Variable: RONW

b. Predictors in the Model: (Constant), CURRENT_RATIO

Table 9: Correlations

		ROCE	RONW	TOTAL_ASSETS
DEBT_EQUITY_RATIO	Pearson Correlation	-.172	-.112	-.013
	Sig. (2-tailed)	.065	.233	.892
	N	115	115	115
CURRENT_RATIO	Pearson Correlation	.342**	.215*	-.409**
	Sig. (2-tailed)	.000	.021	.000
	N	115	115	115
INVENTORY_TURNOVER	Pearson Correlation	.057	.016	-.055
	Sig. (2-tailed)	.543	.862	.557
	N	115	115	115
DEBTORS_TURNVOER	Pearson Correlation	.047	.084	-.039
	Sig. (2-tailed)	.616	.374	.682
	N	115	115	115
INTEREST_COVER_RATIO	Pearson Correlation	.027	-.010	-.015
	Sig. (2-tailed)	.771	.916	.877
	N	115	115	115
LONG_TERM_DEBT_EQUITY_RATIO	Pearson Correlation	-.193*	-.127	-.016
	Sig. (2-tailed)	.039	.175	.848
	N	115	115	115
ROCE	Pearson Correlation	1	.928**	-.379**
	Sig. (2-tailed)		.000	.000
	N	115	115	115
RONW	Pearson Correlation	.928**	1	-.207*
	Sig. (2-tailed)	.000		.027
	N	115	115	115
TOTAL_ASSETS	Pearson Correlation	-.379**	-.207*	1
	Sig. (2-tailed)	.000	.027	
	N	115	115	115

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Findings and Conclusion

The results of the study reveal that current ratio is the sole explanatory variable that is significant in explaining variation in RONW. At the same time, current ratio, total assets and long term debt to equity ratio are found to be significant while explaining variation in ROCE. The results of the study are consistent with Chatterjee (2012) and Panigrahi (2013) which indicated that debt ratio is negatively associated with profitability ratio. The study contradicts the results of Gamlath and Yogendrarajah (2014) who found a significant impact of working capital components on profitability. The study finds only current ratio as the sole working capital management that is significantly associated with profitability measured in terms of ROCE and RONW.

This study was restricted to the companies included in Sensex. Future studies may focus on an individual sector and will try to investigate the relationship between working capital management and profitability in the said sector.

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Agri-financing in Nadiad Taluka: An Empirical Perspective

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Abstract

Agriculture sector is the backbone of Indian economy. Thus the prosperity of the country is dependent upon the prosperity of the agriculture sector. The provision of institutional credit plays a crucial role in the development of this sector. Generally, the small and marginal farmers have less capital of their own to invest in the crop cultivation and many a times they might have to depend upon the informal sources for availing the credit facility. Though, Reserve Bank of India (RBI) and The National Bank for Agriculture and Rural Development (NABARD) have initiated various programmes to increase the flow of institutional credit to agriculture sector, still there persist many gaps in proper implementation of their initiatives. In this context, the present study is an attempt to understand the scenario of agriculture financing in the selected villages of Nadiad Taluka, Kheda district. The study also examines the awareness of the farmers in this area for various sources of agriculture financing. The research also highlights the reasons mentioned by those farmers who have not availed any institutional credit so far. The findings suggest that there is a considerable scope for enhancing the awareness of the farmers and exploring the possibility for providing the institutional credit flow to agriculture sector in Nadiad.

Key Words: Agrifinance, Agricultural Microfinance, Priority Sector Lending, Rural finance

JEL Classification: N5, P33, P45, Q1, Q14

Introduction

A developing economy which mainly relies on agriculture as pivotal source of occupation often encounters poverty and unemployment as its greatest enemy. Agricultural activity has a major effect on the eco-systems, climate, employment and health of communities. Access to financial services in rural areas, is an essential condition for agricultural development. A stoppage or stagnancy of rural finance would cease agricultural activity, which in turn, would aggravate the problem of poverty, unemployment and food security (Desjardins Development International, 2010). Agriculture value chain tends to explain that

farmers have seasonal financial needs depending on the nature of crop and livestock maturing. So, it may be inferred that there is a period of investment in producing and later is the period of selling. Farmers are often cash constrained, limiting their ability to make improvements. Players of the value chain such as input dealers, buyers, traders and processors typically need considerable working capital for inputs, buying crop for sale, processing, arranging transport and incur other service costs to produce and reach markets. Thus, farmers face a zero sum game in which they make a trade-off of processing investments for production and inputs. The rural households, their financial needs and sources needs to be studied in an integrated manner as agricultural, non-farm livelihood and household finance are interwoven (United States Agency International Development, n.d.). Agrifinance was born to address the lacuna in financing agricultural activity which was created due to the failure of state development bank, risk averse attitude of commercial banks to penetrate in rural region and urban and per-urban orientation of microfinance institutions (Ergon, n.d.).

It may be understood that 'Agrifinance' is important as it empowers farmers to increase their wealth and food production for the nation. RBI has come up with the concept of 'Priority Sector Lending' in which an important role is given to banks for providing a specified portion of the bank lending to few specific sectors like agriculture and allied activities, micro and small enterprises, poor people for housing, students for education and other low income groups and weaker sections of the society. According to National Sample Survey Office (NSSO), it is very pivotal to note that in India 58% of rural households are engaged in farming, which generates 15% of India's Gross Domestic Product (GDP) (Damodaran, 2014). Thus, providing of timely agriculture finance is a lifeline for Indian economy.

Sources of Agri-finance

The sources of agricultural finance can be segregated into two broad aspects viz., Non-Institutional sources and Institutional sources. Non-institutional sources like moneylenders, traders,

commission agents and landlords etc provide credit to farmers at exorbitant interest rates and bare minimum formalities (Seth, n.d.). Borrowing from relatives is also non-institutional form of finance, which is often interest free. Table 1 discusses the institutional sources of agri-finance in India.

Table: 1 Sources and Schemes of Agricultural Finance

Direct Sources	Description
Cooperatives	It consists of Primary Agriculture Cooperative Societies (PACs) and Primary Cooperative Agricultural and Rural Developments Banks (PCARDBs). At the lowest tier are the PACs. These are organised at the village level. At the second tier, District Central Cooperative Banks (DCCBs) are organised at the district level. At the third and uppermost tier are the State Co-operative Banks (STCBs) organised at the state level.
Scheduled Commercial Banks and Regional Rural Banks (RRBs).	It provides both short and medium term loans for agriculture and allied activities.
Schemes	
The National Bank for Agriculture and Rural Development (NABARD)	• It is the apex institution at the national level. • It provides short-term credit (up to 18 months) to SCBs for seasonal agricultural operation (crop loans), marketing of crops, purchase & distribution of fertilizers and working capital requirements of cooperative sugar factories. • It provides medium-term credit (18 months to 7 years) to SCBs and RRBs for agricultural purposes purchase of shares of processing societies and conversion of short-term crop loans into medium term loans in areas affected by natural calamities. • It provides medium and long-term credit (not exceeding 25 years) for investment in agriculture under schematic lending to SCBs, Land Development Banks (LDBs), RRBs and commercial banks. • It provides long-term assistance in the form of loans to state governments (not exceeding 20 years) for contribution to share capital of cooperative credit institutions. • It has two level of finance, the first is extended to RRBs, and apex institutions, namely STCBs and State governments. The other type of refinance is extended to augment resources for ground level deployment of rural credit.

• Rural Infrastructure Development Fund (RIDF) with the major objective of providing funds to state governments and state-owned corporations to enable them to complete various types of rural infrastructure projects. • Provides credit to Micro Finance Institutions (MFIs). • Kissan Credit Scheme to facilitate short-term credit to farmers.
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(Source: Adapted from Seth, n.d.)

Trends in Agricultural Credit

In India, a multi-agency institutional framework is adopted for distribution of credit to the agriculture sector. Direct institutional credit to agriculture and allied activities is mainly provided by co-operative banks, commercial banks and regional rural banks. Table 2 highlights the quantum of institutional credit flow (short term as well as long term) to agriculture sector by various institutions from the years 2000-2001 to 2014-2015.

Table 2: Direct Institutional Credit (Loans Issued) for Agriculture and Allied activities –Short-Term and Long-Term (Rs. in Billion)

Year	Co-operatives	Scheduled Commercial Banks	Regional Rural Banks
2000-2001	272.95	164.4	39.66
2001-2002	305.69	186.38	45.46
2002-2003	340.4	252.56	58.79
2003-2004	400.49	362.03	71.75
2004-2005	450.09	483.67	119.26
2005-2006	481.23	805.99	153
2006-2007	540.19	1152.66	202.29
2007-2008	576.43	1134.72	238.38
2008-2009	587.87	1606.9	264.99
2009-2010	634.97	1832.53	346.4
2010-2011	781.21	2227.92	439.65
2011-2012	879.63	3128.77	530.59
2012-2013	1112.03	----	646.49
2013-2014	1199.64	----	783.74
2014-2015	----	----	978.37

(Source: Publications, RBI (n.d.) Retrieved July 14, 2016 from <https://www.rbi.org.in/scripts/PublicationsView.aspx?id=16497> and <https://www.rbi.org.in/scripts/PublicationsView.aspx?id=16498>)

From Table 2, it is evident that co-operatives dominated the loan disbursement to agriculture sector till the year 2004-2005. From the consequent year 2005-2006, the absolute amount of direct loan issued by scheduled commercial banks was constantly higher than the co-operatives till the year 2014-2015. Table 3 highlights the compound growth rate of direct agricultural

advance in India for loan disbursement in the pre-reform (from 1981 to 1991) and the post-reform (1991 to 2012) period.

Table 3: Compound Annual Growth Rate (CAGR) of Direct Institutional Credit (Loans Issued) for Agriculture and Allied activities – Short-Term and Long-Term

Source of Institutional Credit	CAGR (%) in Pre Reform Period (From 1981 to 1991)	CAGR (%) in Post-Reform Period (From 1991 to 2012)
Co-operatives	10.09	15.39
Scheduled Commercial Bank	15.65	22.61
Regional Rural Banks	6.05	26.64

(Source: Authors' Compilation adapted from RBI Publications)

From Table 3, it may be said that during the pre-reform period, the scheduled commercial banks achieved highest CAGR for the loan disbursement followed by Co-operatives and Regional Rural Banks. While in the Post-reform period, the Regional rural banks secured the maximum CAGR followed by Scheduled Commercial banks and the Co-operatives.

The study further evaluates the break-up of institutional as well as non-institutional credit flow to the agriculture sector. The percentage break-up of the same is given in Table 4.

Table 4: Break-up of Institutional and Non-Institutional Agricultural Credit

Sources of Credit	1951	1961	1971	1981	1991	2002	2013
Institutional	10.2	20.9	32	56.2	66.3	61.1	64
Government	-	6.2		4	5.7	1.7	1.3
Cooperative Societies/Banks, etc	6.2	12.5		27.6	23.6	30.2	28.9
Commercial Banks	4	2.2		23.8	35.2	26.3	30.7
Insurance, Provident Fund	-	-		0.8	0.7	0.5	0.1
Other Agencies (financial corporations/institutions, financial companies)	-	-		-	1.1	2.4	3
Non-Institutional	89.8	79.1	68	43.8	33.7	38.9	36
Moneylenders	39.8	25.3		17.2	17.5	26.8	29.6
Relatives, Friends, etc.	-	-		11.5	4.6	5.2	4.3
Traders & Commission Agents	-	-		5.8	2.2	2.6	
Landlords	21.4	15		3.6	3.7	0.9	0.4
Others	28.6	38.8		5.7	5.7	2.4	1.7
Total	100	100	100	100	100	100	100

(Source: Hoda and Terway (2015), Credit Policy for Agriculture in India – An Evaluation, Retrieved July 12, 2016 from icrier.org/pdf/Working_Paper_302.pdf)

From Table 4, it is seen that the proportion of institutional credit was significantly less as compared to non-institutional credit from 1951 to 1981. The trend changed in the next decade. From the year 1991, the proportion of institutional credit was steadily increasing as compared to non-institutional credit. As discussed previously, the progress of the institutional credit was mainly from commercial banks and by 1991, they had become the major institution, leaving co-operative banks well behind. During 1951-1981, though the

share of non-institutional credit as a proportion of overall agriculture credit was high, the same dropped rapidly till 1981. Further, it may be observed that the institutional share in agricultural credit gained some ground in 2013, although it still remained lower than the same in 1991. Though central and state government are continuously planning and implementing various policy measures for ensuring the steady flow of credit to this priority sector, the share of institutional credit lost ground in agriculture and fell from 66.3 per cent in 1991 to 64 per cent in 2013.

Literature Review

Agri-finance is not a novel concept, but a rich concept. Various researchers have contributed to the field of rural finance and rural development. Problem identification, model development, suggestions to improvise rural economy etc., were the major outcomes of the research. It is very imperative to understand the terminology of rural finance, agricultural finance and microfinance. Rural finance, as defined by the World Bank, is the provision of a range of financial services such as savings, credit, payments and insurance to rural individuals, households and enterprises, both farm and non-farm, on a sustainable basis. It includes financing for agriculture and agro-processing. Agricultural finance is defined as financing agricultural related activities such as input supply, production, distribution, wholesale, processing and marketing. Microfinance is the provision of financial services for poor and low income people and covers the lower ends of both rural and agriculture finance. Thus, it could be inferred that rural finance is the universal set, agricultural finance is its subset and microfinance is the intersection of both rural and agricultural finance.

In the study of various paradigms on microcredit and agriculture, Andrews (2006) expressed that there was a need of dialogue between policy makers, donors, governments and practitioners on agriculture credit and rural finance. Through minute observations of what is working and what has been learned in different regions could lead to determine what may make agriculture credit work in one's area of operation. Researchers have coined a new model "agricultural microfinance" for providing financial services to poor, rural farming households. The model has borrowed concept from traditional microfinance, agricultural finance, and leasing, area-based insurance, use of technology and existing infrastructure and contracts with processors, traders and agribusinesses. It was noted that microloans were often used to purchase livestock and for daily production, but there was less prevalent usage of loans to buy

agricultural inputs like seed, fertilizer, wages etc. (Consultative Group to Assist the Poor-CGAP, 2006).

The largest cooperative financial group of Canada- Desjardins Development International (2010) applied the "Value Chain" approach to the Agri-food sector i.e. development from land to the consumer's plate. Marketing channels, techniques, equity protection and financial services adaptation were treated as the four vital pillars of the value chain. It was highlighted that financial institutions adopt different peculiarities in granting loan and managing credit risk, when it comes to rural finance. Other critical points like adoption of digital technology, building of technical and human capacity at all levels, good governance and good legal framework and supporting mainstreaming of women and minorities were suggested by researcher (Global Partnership for Financial Inclusion, 2015). Agricultural financing must be viewed in the context of a profit driven, viable, guaranteeing good rate of return affair. Innovation in finance to suit the rural needs and consensus amongst all stakeholders were advised (Ruete, 2015). Traditional approach on agricultural finance was based on taking a credit risk which has been transformed to performance risk which refers to the fact that as long as the borrowers continue performing in the supply chain, the lender is assured of reimbursement (United Nations, 2004).

Salami & Arawomo (2013) used Ordinary Least Squares method to devise a model of agricultural credit model by pooling data from 1990-2011. Corruption Index, Rule of Law Index, Regulatory Quality Index and Government Effectiveness Index casted negative impact on agricultural credit. It was described that savings rate was low in Africa, interest rates were charged higher and land availability had positive impact on agricultural credit. Lowering interest, formation of Cooperative Societies, Thrift and Credit Societies amongst farmers were suggested by researchers. Quarterly, Udry, Al-Hassan, & Seshie (2012) in the empirical study described that intermediaries often provided supplier and buyers credit, which was 'mortgaged' against expected, or future harvest. Middlemen often profiteered from farmers and their gross margin had significant regional variations. Direct sales to consumers (which guaranteed higher than farm gate prices) and formation of cooperatives societies was shown as remedy against exploitation of farmers. Collateral requirement must continue to be adjusted and made flexible in all agricultural banks, proper credit appraisal for first line of defence, voluntary adoption of Islamic principles in financing agricultural credit, diversification of financial portfolio, setting up of rural banks, avoidance of banks into non-financial activities, provision

for insurance etc. were suggested by research scholars (Mustafa et al, 2011). Farmers relied on their own savings, loans from informal avenues to finance their working capital and investments needs. Microfinance products and lending methodologies were not well suited to farming clients. Moreover, there was no magic solution in the toolkits available to governments and international agencies for promoting sustainable agriculture credit systems. Direct interest rate subsidies were found to be distorting when compared to indirect subsidies for building infrastructure and institutions (Meyer, 2011).

A summary of case-lets was documented by Global Partnership for Financial Inclusion (2012) in which the innovative models like External Venture Capital Finance for Open Market Crops, Internal Value Chain finance, Factoring, Mobile Banking, Direct Smallholder Lending, Crop/Weather Insurance, Branchless banking, Health Insurance, Savings Account linked Finance, Nucleus/ Outgrower, Term Loans, Equipment Finance, Collateral Management Agreement and Warehouse Receipt Financing were discussed. Various innovative models to find agricultural finance were primary market on the emission rights of greenhouse gas, food security branding, lottery, rounding up bank payment transactions, international finance facility, diaspora bonds, development impact bonds, public-private partnerships and structured funds, guarantee funds for bank credit to agriculture and food value chain, smart input subsidies and leveraging existing remittances invested in agriculture (Leading Group, 2012).

Hendrayadi et al (n.d.) noted an important fact that microfinance had ignored financing small farmers in order to remain profitable. It had failed to meet a critical objective in its double bottom line approach. It was suggested that to reach the poor, MFIs must find a way to lend to rural farmers who were equally creditworthy as urban poor. Sarris (2014) made a noteworthy point that agricultural transformation required considerable finance as the demand for upgradation required both the type of funds i.e. short-term as well as long term. Lack of finance could act as a hurdle for agricultural development and poverty reduction. It was also pointed out that rural financial institutions were inadequate to meet the financial needs. Majority of the financial needs were served by private financiers. Despite of the West advocation on the removal of subsidies from agriculture, it was still continued in Nigeria. Credit to the sector had dwindled. It was recommended to patronage the farmers by providing incentive of interest drawback schemes, encourage lenders to provide more credit and reduce the default rate of agricultural loans (Adetiloye, 2012).

Survival of agricultural enterprises in Ukraine and family farms in Slovenia confirm that their operation and survival were dependent on state support i.e. government subsidies (Bojnec et al, 2014). Commercial banks, moneylenders, relatives or neighbours, corporate societies were major sources of agricultural credit (Miriam et al, 2014). In Nigeria, agriculture is a critical sector of the economy in terms of job creation, food security, and source of industrial raw materials, therefore financial sector development would enhance agricultural performance (Afangideh, n.d.).

The Green Revolution necessitated the need of higher agricultural credit, which was unfortunately neither met by commercial banks (as they were not tuned to the needs and requirements of small and marginal farmers) nor Cooperatives (lacked resources to meet the expected demand). Thus, a special banking structure, capable of combining local feel and familiarity of rural problems with professionalism of commercial banks was thrust through the formation of RRBs and NABARD (Maan & Singh, 2013). In the empirical study by Kumar & Gambhir (2015), farmers opined that banks charged higher rate of interest, fear factor on recovery of loan and loan process was quite cumbersome. Researcher suggested to lower the interest rate, simplify the loan process, impart rural training and removal of fear factor. Researcher described that institutional sources for agricultural finance were Cooperative Societies (PACS, Central Cooperative Bank and SCB), Commercial banks, LDB, RRBs, Government and NABARD and non-institutional sources were money lenders and land-lords and others (Lad, 2013). The growth trend in agriculture finance was assessed for the period of 10 years, which was due to indirect finance and the major beneficiaries were small and marginal farmers (Ramakumar, n.d.).

Nerella (2015) explained that Kissan Credit Card had played a role in farm operation and income of farmers. Availability of crop loan helped the farmers to realize higher gross return per hectare. Roy (2012) appreciated in the case-study that MFIs in Assam played a significant role in providing agricultural loans to farmers. The loan portfolio was quite profitable with healthy return on assets of 9.43% compared to 1.40% national mean returns. Marginal, small and dalit farmers account for a large set of Indian farming class who were still devoid of source of capital, despite being notified under priority sector lending aspect. Empirical research pointed out that commercial banks took lead in providing term loans, whereas in RRBs and co-operative societies, crop loan portfolio was strongest. Discrimination in access and magnitude of benefits was discovered in the case of marginal and deprived

farmers when compared to better-off farmers (Jain & Singh, 2014). Major gaps in the institutional credit with respect to agricultural finance, were inadequate provision of credit to small and marginal farmers, limited deposit mobilization and heavy dependence on borrowed funds. Seena (2015) evaluated the position of various lending institutions through the tools of conventional ratios and regression model. The researcher recommended that owned fund position of the primary banks could be improved by receipt of capital contribution from the apex bank NABARD and State government. Interest subsidy could be provided at the time of prompt repayment. Apart from land security, character of beneficiaries should also be taken into account (Joseph, 1994). RRBs played a vital role in development of rural and needy agriculture poor people in all spheres. The success story of the same was depicted in the case of Andhra Pradesh Grameena Vikas Bank (Rao & Rao, 2014).

The examination of available literature in agrifinance is mainly impact oriented or suggestive in nature. Majority of the studies are authored by reputed institutions. Studies are more in foreign context, especially in Nigeria. Very limited research scholars have carried out empirical research in the field of 'Agrifinance' in India. Available literature can be categorized into themes such as rural finance, agricultural finance, microfinance, rural development etc. A gap was noticed with respect to empirical study pertaining to Gujarat state. Present paper makes an attempt to address this gap.

Research Objective

The basic objective of the research is to understand the prevailing condition for the agriculture finance in Nadiad Taluka, Kheda district. The specific objectives are stated as below:

- To understand the trends in credit flow to the agriculture sector.
- To analyse the demographic profile of the farmers in the selected villages of the Nadiad Taluka, Kheda district.
- To examine the reliance of the farmers on the institutional credit for agriculture requirements.
- To analyse the awareness of the farmers for various sources of agriculture finance.
- To study the satisfaction level of those who have availed the external finance and to understand the reasons for those who have not availed such funding.
- To explore the future scope and opportunity for agriculture finance in Nadiad.

Research Methodology

Table 5: Research Methodology Adopted for Empirical Study

Parameters	Survey of Farmers
Research Design	Descriptive Method
Sampling Method	Non - probability Convenience sampling
Sample Size	106
Sample Size Determination	$n = Z^2 \cdot p \cdot q / \epsilon^2$, i.e. $(1.96)^2 \cdot (0.5) (0.5) / (0.09)^2$
Sampling Duration	December 2015 to February 2016
Sampling Area	Maholai, Maghroli, Silod, Paldi and Sodpur villages of Nadiad Taluka, Kheda district
Sampling Element	Farmers of the selected villages
Research Approach	Survey
Research Instrument and Contact Method	Questionnaire - filled through personal visit
Data Collection	Primary and Secondary
Data Processing & Management	Excel and SPSS 19
Data Analysis	Frequency distribution, cross tabulation, descriptive statistics such as mean, median, mode, standard deviation
Inferential Statistics	Independent sample T test

(Source: Authors' Compilation)

Analysis and Findings

The entire survey of the farmers is divided into four parts namely, demographic information, details related to agriculture, membership of farmers' club and details related to external funding.

Section I: Demographic Analysis

All 100% respondents were male engaged in to agriculture occupation. Single gender presence of male respondent indicated that agriculture being the hard-core and labourious activity, is being carried out by male. Mean age of farmers was 48 years in the study. The youngest farmer respondent was of 24 years of age and the eldest farmer respondent was of 90 years. Maximum numbers of farmer respondents were of 40 years of age. This indicates that the middle aged farmers were actively involved in the agriculture activity in the Nadiad.

Regarding the education of these respondents, it was observed that 65% of them were educated till HSC, while there was a significant proportion of the farmers who were educated till graduation and post-graduation level i.e. 35%. It is an established fact that the education plays a pivotal role in the development of new farming practices and increases the agriculture productivity.

The fact that the farmers of the region were having a reasonable level of education indicates that there is a greater scope for implementing new technologies and will lead to further development of the agriculture sector.

The study covered those who were exclusively involved in crop cultivation or cattle rearing as well as those who were involved in both these activities. As per the findings, majority of them (57%) were observed to produce the crop as well as involved in to cattle rearing activity. This may be, to generate additional income for subsistence and a substitute for one time money derived from seasonal farming. The average income of the respondents was observed to be Rs. 264675 and the average expenditure was reported to be Rs. 178087. Thus, it may be said that the farmers of this region earn an average margin of 33% approx. from the agriculture activity.

Section II: Details related to Agriculture

The average land holding by the farmers was observed to be 11 acres with a standard deviation of 10 acres of land. Majority of the farmers were holding 10 acres of land. While the average operation land holding (land used for cultivation) was reported to be 8 acres. The non-arable land was having certain limitations such as impracticality of drainage, stoniness, lack of sufficient fresh water for irrigation, steepness, adverse climate, excessive wetness, etc.

Majority of the farmers (61%) were engaged in to cultivation of Rabi crops. Wheat, Potato and Maize are three main Rabi crops grown in this region. Again 72% of the farmers were cultivating Tobacco and Cotton, the major cash crops in this area.

Majority of the farmers surveyed (89%) had tractors for conducting the farming activity apart from trolley, thresher, harvester and others.

Section III: Membership of Farmers' Club

Farmers' clubs are the informal forums of the farmers organised by the banks. As per the study, only 12% of the farmers were the members of the farmers' club. Such clubs are organized by rural branches of banks with the support and financial assistance of NABARD for the mutual benefit of the banks concerned and rural people. The programme is aimed at transmitting the latest agriculture techniques to the farmers' field, orienting them to establish better relationship with banks, adoption of latest post-harvest handling technology, value addition and enjoy the benefits of collective bargaining power for procuring inputs and select their produce (Trivedi and Soni, 2015).

As the farmers' clubs are set up and managed by banks' rural

branches, these clubs can actively take up the task of spreading awareness regarding various sources of agriculture finance available to the farmers. In order to check the membership of the farmers' club and availing the external funding by the farmers, a chi-Square test was performed. As per the findings, there was a statistically significant relationship between the membership of the farmers' club and availing of external finance, $\chi^2(1, N = 106) = 6.39, p = .01$. However, the strength of association as measured by Phi (0.25) was reported to be weak. Out of 13 members of farmers' club, there were 8 members who availed external funding.

Further, an independent sample T test was performed to compare the awareness of the farmers who were the members of such clubs and those who were not, for various sources of finance. The results are reported in Table 6.

Table 6: Descriptive and Test Statistics (Independent sample T Test) for Awareness for Sources of Finance

Sr. No.	Sources of Finance	Mean Members of Farmers' Club	Mean Non-Members of Farmers' Club	T Value	Sig. Value	Hypothesis Rejected / Not Rejected
1	Credit from regional rural bank	2.54	2.60	(.147)	0.88	Not Rejected
2	Credit from state Co-operative banks	2.15	2.40	(.743)	0.46	Not Rejected
3	Credit from commercial banks	2.46	3.26	(.842)	0.40	Not Rejected
4	Credit from primary agriculture co-operative society	3.31	3.18	.291	0.77	Not Rejected
5	Microfinance	3.69	3.20	.977	0.33	Not Rejected

(Source: SPSS Output)

As per Table 6, there was no significant difference in the awareness of the members and non-members of farmers' club for various sources of finance (p values > 0.05). Hence, the farmers' clubs can explore this opportunity and take up some literacy campaign as the mean values for awareness were less than three for all the sources except Microfinance and the credit from primary agriculture co-operative society. It means that the members did not have fair knowledge for these sources with the exceptions as discussed above.

Section IV: Details related to External Financing

As per the study findings, 31% of the farmers opted for external

funding mainly in the form of bank loan (43%), loan from relatives (27%), Government Subsidy (11%) and loan from landlord (8%) among others such as lending from money lenders, microfinance, loan from primary societies etc. The average proportion of internal and external funding was observed to be 89% and 11% respectively. The majority of the members were having 100% internal funding. These farmers had mostly availed funding from Bank of Baroda (BOB), State Bank of India (SBI), Co-Operative banks and microfinance institutions.

The farmers were asked to specify the purpose for taking such funding. As per the findings, majority of them took such funding for purchase of fertilizers (40%), followed by purchase of farm equipment (31%), land development (20%) and purchase of land (9%).

The average amount of the funding was observed to be Rs. 5,12,571 and the average interest paid by them on such funding was 10%. The maximum interest paid by the farmers was as high as 14%.

The study checked upon the satisfaction level of those who availed the funding across various parameters such as procedure for availing the funding, documentation, staff behaviour, interest rate, repayment schedule etc. The descriptive statistics with respect to the same is presented in Table 7.

Table 7: Descriptive Statistics of Satisfaction Level of the Farmers for Various Parameters of Availing the Finance

Parameters	Mean	Std. Deviation
Procedure for Availing Fund	2.82	1.28
Documentation	2.11	1.28
Staff Members' Behaviour	2.89	1.10
Interest Rate	2.11	1.19
Repayment Schedule	3.78	1.28

(Source: SPSS Output)

From Table 7, it may be observed that except for the repayment schedule, for all other parameters the mean value was observed to be less than 3 indicating that the farmers who availed the funding were not satisfied with the procedure, documentation, staff behaviour and the interest rate.

The study checked upon the awareness of the farmers for various sources of finance as mentioned in the earlier section. The descriptive statistics of the same are reported as under.

Table 8: Descriptive Statistics of Awareness of Farmers for Sources of Finance

Sources of Finance	Mean	Std. Deviation
Credit from regional rural bank	2.59	1.45
Credit from state Co-operative banks	2.37	1.11
Credit from commercial banks	3.16	3.19
Credit from primary agriculture co-operative society	3.20	1.44
Microfinance	3.26	1.69

(Source: SPSS Output)

As per Table 8, it may be noted that the farmers have just heard of Credit from regional rural banks and state Co-operative banks. They did not have sufficient knowledge about the same. For the rest of the sources i.e. credit from commercial banks, primary agriculture co-operative society and microfinance, the farmers did not know completely but have a fair idea about them.

Further, the awareness for all these sources were compared for farmers having education less than graduation, and graduation and above the graduation with the help of independent sample T test. The results are reported in Table 9.

Table 9: Descriptive and Test Statistics (Independent sample T Test) for awareness for sources of finance

Sr. No.	Sources of Finance	Mean Less than Graduation Literacy	Mean Graduation and above literacy	T Value	Sig. Value	Hypothesis Rejected/ Not Rejected
1	Credit from regional rural bank	2.54	2.70	(.561)	0.58	Not Rejected
2	Credit from state Co-operative banks	2.30	2.49	(.806)	0.42	Not Rejected
3	Credit from commercial banks	3.23	3.03	(.314)	0.75	Not Rejected
4	Credit from primary agriculture co-operative society	3.13	3.32	(.657)	0.51	Not Rejected
5	Microfinance	3.14	3.49	(.994)	0.32	Not Rejected

(Source: SPSS Output)

As per Table 9, there was no significant difference in the awareness for those who were having higher literacy as compared to those who were having less literacy ($p > 0.05$).

The study revealed that majority of the farmers (69%) did not opt for any external funding, the study examined the reasons for not

raising any institutional loan for agriculture activity. As per the findings the reasons include, not sufficient collateral assets (27%), followed by lack of awareness (21%), difficult documentation (16%), cumbersome procedure (14%), not having a bank account (9%), no knowledge of English language (6%), denial of access by banks (6%) and other convenient options (1%).

The research also examined the willingness of the respondents for availing institutional finance in future. As per the findings, 40% of the farmers were not willing to opt for such funding. That means there is a significant portion (60%), which is ready to explore this opportunity.

Conclusion

Agriculture has always been a very vital sector for India and the sector plays a strategic role in the economic life of the Indian Society. Over the years, there are many developments and diversifications in the input, process and output stages in the agriculture sector and these have led to an increase in credit needs of the farmers. Availability of credit at a reasonable rate of interest and at the right time, is very critical for the farmers in general and small and marginal farmers in particular, as they lack adequate resources and are therefore dependent upon the formal or informal credit sources for purchase of fertilizers, equipment, payment to labourers, payment for irrigation facility etc. In this context, the study highlights the prevailing conditions in selected villages of Nadiad for institutions finance in agriculture sector.

The study highlighted that significant proportion of the farmers (69%), covered under the study did not opt for any institutional finance for variety of reasons such as lack of collateral assets, lack of awareness, difficult documentation, cumbersome procedure, not having a bank account, no knowledge of English, denial of access by banks and availability of other convenient options. Though central and state government have formulated various public policies for easy flow of credit and subsidies to this sector, a large number of farmers are still out of the reach. The financial institutions and the banks need to ensure proper implementation of the policies and remove the bureaucratic hurdles in getting credit from institutional sources.

Besides, the awareness for various institutional sources of credit was also observed to be less among the respondents. The banks and financial institutions can take up an active literacy campaign in rural areas of the region to spread awareness and provide the correct information to the source. This will also help to change the mindset of the farmers who have negative perceptions

towards institutional credit and thereby increase the flow of credit to the small and marginal farmers.

Farmers' club, an informal gathering of the farmers, can also take up some engagement in spreading this awareness. As these clubs are set up by the rural bank branches, they can work in close connection with those farmers who are in need of credit and assist them in providing them timely credit at the reasonable rate.

Overall, as per the findings of the study, there is a huge scope for the banks and financial institutions to increase the availability of credit to the needy farmers of Nadiad.

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Lending by PSBs to Priority Sector: An Analysis with context to Agriculture, MSEs & Weaker Sections

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Abstract

After nationalization of the Banks directed lending to certain sectors, such as, Agriculture, Small Scale Industries and weaker section and others, collectively known as Priority Sector was emphasized. Under this Sectoral and Sub-sectoral targets have been laid down from time to time, with the aim of upliftment of these sectors and to bring about a balanced development of the country. It was observed that the bulk of bank advances was directed to large and medium-scale industries, and big and established business houses, while Agriculture, Small Scale Industries and exports – the vital sectors of the economy – did not receive adequate attention. As a measure of social control over banks, the Reserve Bank of India prescribed a modified format for reporting priority sector advances and issued certain guidelines in February 1972, indicating the scope of the items to be included under the various categories of priority sector.

The priority sector constitutes a major chunk of the bank credit say 40%. The present study focuses on banking sector in terms of Priority Sector Lending. In this chapter, the researcher has tried to examine that distribution of lending to selected priority sectors by selected PSBs during the study period varies within each group or it follow similar pattern of priority sector lending. For the purpose of this analysis, various priority sector lending ratios are worked out as a percentage of Adjusted Net Bank Credit. For the analysis purpose, seven years period has been selected from 2007-08 to 2013-14 and 20 Public Sector Banks operating in India have been selected as sample. ANOVA test is used for the analysis.

Key Words: Priority Sectors, Adjusted Net Bank Credit (ANBC), Micro & Small Enterprises (MSEs), Weaker Section, PSBs (Public Sector Banks).

Introduction:

An enunciation of the need to channelize the flow of credit to certain sectors of the economy, known as the priority sectors, in the larger interests of the country, can be traced to the Reserve Bank's credit policy for the year 1967-68. The nationalization of

the 14 major commercial banks in July 1969 led to a considerable reorientation of bank lending, especially to the priority sectors of the economy which had not previously received sufficient attention from the commercial banks.

Conceptual Framework

As per extant instructions of RBI, 40% of the Adjusted Net Bank Credit (ANBC) should go to priority sectors like agriculture and allied activities, Micro, Small and Medium Enterprises (MSMEs), housing loans, education loans, micro credit, and state sponsored organizations, weaker sections, export credit etc. All schedule commercial banks operating in India have to observe and follow, the Reserve Bank of India's guidelines regarding the distribution of bank's advances to priority sectors of the economy. Thus, the priority sector lending norms demands full-fledged implementation by banks in India.

Public Sector Banks are the leading players of banking sector in India since nationalization. Therefore, PSBs are more expected to ensure full adherence to the priority sector lending norms by covering huge mass of the people/borrowers eligible to be considered under priority sector. Thereby to facilitate upliftment of those groups/segments, which are neglected so far.

Literature Review

Agarwal O. P. (2008), in his book discussed in detail about Priority Sector Financing i.e. to primary sector, secondary sector and tertiary sector. It also describes about small scale industries (SSIs), appraisal methods, credit flow to SSIs, major problems and challenges faced by the SSIs etc.

A Study on "Effects of Reserve Bank of India (RBI-2011) Regulations on Priority Sector Lending for Micro Finance Institutions (MFIs)", Microfinance Researchers Alliance Program (MRAP) Study, IMFR Research, Centre for Micro Finance. This study is a collaboration of six MRAP professors and two CMF researchers. The study involves researchers interviewing 32 MFIs representatives across 7 states to understand their perspectives on the effect of some of the Malegam Committee recommendations and Reserve Bank of India (RBI) guidelines for

MFIs to qualify for priority sector advances. Altogether, the researchers interviewed 15 NBFC-MFIs and 17 NGO-MFIs, a total of 32 MFIs in 7 states viz. a) Andhra Pradesh b) Delhi c) Karnataka d) Maharashtra e) Orissa f) Tamil Nadu and g) West Bengal. In this paper the researchers presented how microfinance institutions are responding to the new RBI regulations. The paper also reviewed responses from the MFIs and present the findings highlighting practitioners' outlook towards the strengths and weaknesses of some of the RBI guidelines mentioned above. It highlighted the current funding situation among the interviewed MFIs and how these MFIs have changed their business strategies to fit into the regulations.

Najmi Shabbir (2013), in their research paper on "Sector Wise Priority Sector Advances in India", carried out comparative analysis of Agricultural Advances and Small Scale Industries Advances by Scheduled Commercial Banks (as a whole) and by Public Sector Banks (as a whole) during the period from 1969 to 2011. It was observed that the share of agriculture credit in net bank credit has increased in last ten year. However, share of direct agriculture credit has come down from 80% in 1999 to 68% in 2007. In an analysis between SCBs and PSBs, it concluded that in direct agriculture credit as well as in credit to SSIs, the share of PSBs is higher as compare to SCBs as a whole. The growth rate of lending to SSIs was the highest in 2006 and 2007. It was mainly due to several favorable policy initiatives undertaken by Central Government and the Reserve Bank of India for stepping up of credit to Small and Medium Enterprises in 2005. Over the study period, indirect advances to agriculture had increased as compare to direct credit to agriculture.

Rajamohan S. and Durairaj D (2012) in their research paper, "Empowering SMEs Through Priority Sector Advances studied the overview of Small & Medium Enterprises (SMEs), SMEs contribution for export, Financing for SMEs, Challenges and opportunities, and suggestions. This sector contributes 8 per cent of the nation GDP, 45 percent of the manufactured output and 40 percent of exports. The MSMEs provide employment opportunities to 60 million persons through 26 million enterprises. The labour to capital ratio in MSMEs and the overall growth in the MSME sector is much higher than in the large industries. It concluded that Commercial Banks should come out of the traditional asset based lending mind set, while devising cash flow or collateral-based lending models, and simplified assessment, appraisal models must be introduced. Small & Medium Enterprises look of convenience and simplicity in their banking requirements and these should be delivered through the

effective use of technology by the banks. Banks should view priority sector lending to the SMEs as a profitable avenue rather than an avenue for forced lending.

Period of the Study

The period of the study covers 7 years from 2007-08 to 2013-14.

Objectives of the Study

- To study the distribution of lending to priority sectors viz. Agriculture, MSE and Weaker Section by selected Public Sector Banks in India.
- To examine whether the distribution of lending to priority sectors among selected banks varies significantly or not.

Data Collection

The main source of data for the study is secondary data, collected from the published Annual Reports of selected Public Sector Banks, Various Books and research papers related to subjects and Reserve Bank of India website.

Sample Size

For this study, 20 Public Sector Banks operating in India as on 31st March 2014 are selected as sample based on the availability of required data.

Tools for Analysis

For the analysis and evaluation purpose, Ratio Analysis and ANOVA (Analysis of Variance) have been used. The following ratios are worked out for the analysis:

1. Agriculture Advances (Agri) Ratio = Total Agriculture Advances / ANBC
2. Micro & Small Enterprise Advances (MSE) Ratio = MSE / ANBC
3. Weaker Section Advances (WS) Ratio = WS / ANBC

Hypotheses

- H₁:** There is no significant difference in Agri Advances Ratio in Selected PSBs during the study period.
- H₂:** There is no significant difference in MSE Advances Ratio in Selected PSBs during the study period.
- H₃:** There is no significant difference in Weaker Section Advances Ratio in Selected PSBs during the study period.

Analysis

Table 1: Analysis of Variance in Total Agri Advances Ratio

Source of Variation	Sum of Squares (SS)	Degree of Freedom (d.f.)	Mean Squares (MS)	F – Calculated value	F – Table Value	P - value
Between Groups	248.77	6	41.462	3.20	2.10	0.00571
Within Groups	1721.5	133	12.944			
Total	1970.3	139				

Table 2: Analysis of Variance in MSE Advances Ratio

Source of Variation	Sum of Squares (SS)	Degree of Freedom (d.f.)	Mean Squares (MS)	F – Calculated value	F – Table Value	P - value
Between Groups	487.8962	6	81.31603	9.79	2.10	6.33E-09
Within Groups	1104.693	133	8.30596			
Total	1592.589	139				

Table 3: Analysis of Variance in Weaker Section Advances Ratio

Source of Variation	Sum of Squares (SS)	Degree of Freedom (d.f.)	Mean Squares (MS)	F – Calculated value	F – Table Value	P - value
Between Groups	35.6709	6	5.94514	0.839	2.10	0.54206
Within Groups	942.647	133	7.08757			
Total	978.318	139				

Findings of the Study

The following are the findings of the analysis.

Ratios	F cal and F tab Value	Findings	Interpretation
Agri Advances Ratio	$F_{cal} > F_{tab}$ 3.20 > 2.10	H_0 : Rejected	There is significant difference in total Agri Advances ratio in selected 20 PSBs during the study period.
MSE Advances Ratio	$F_{cal} > F_{tab}$ 9.79 > 2.10	H_0 : Rejected	There is significant difference in MSE Advances ratio in selected 20 PSBs during the study period.

Weaker Section Advances Ratio	$F_{cal} > F_{tab}$ 0.839 < 2.10	H_0 : Accepted	There is no significant difference in WS Advances Ratio in all selected 20 PSBs during the study period.
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Limitations of the Study

- The present study is mainly based on secondary data and secondary data have their own limitation and therefore its findings depend entirely on the accuracy of such data.
- The present study considers Agriculture Advances, MSE advances and Weaker Section advances only.
- The present study covers only 20 public sector banks in India.
- The present study is largely based on accounting and statistical techniques that have their own limitations and it will affect the study.

Conclusion

- Table 1 shows that calculated value of 'F' is 3.20 which is higher than table value of 2.10 at 5% level of significance with c.f. being $v_1 = 6$ & $v_2 = 133$ and (p - value < 0.05). It indicates that the hypothesis H_0 is rejected that during the study period, Total Agriculture Advances Ratio of the PSBs is significantly different. It shows that the level of Total Agriculture Advances as a proportion of ANBC vary significantly in selected Public Sector Banks during the study period.
- Table 2 indicates that calculated value of 'F' is 9.79 which is higher than table value of 2.10 at 5% level of significance with c.f. being $v_1 = 6$ & $v_2 = 133$ and (p - value < 0.05). It indicates that the hypothesis H_0 is rejected that during the study period, there is significant difference in MSE Advances Ratio in PSBs. i.e. the proportion of MSE advances to ANBC varies significantly during the study period.
- Table 3 exhibits that calculated value of 'F' is 0.839 which is less than table value of 2.10 at 5% level of significance with c.f. being $v_1 = 6$ & $v_2 = 133$ and (p - value > 0.05). It indicates that the hypothesis H_0 is accepted. So, it may be concluded that during the study period, Weaker Section Advances Ratio in selected PSBs is not significantly different. i.e. the proportion of weaker section advances to ANBC does not vary significantly during the study period.

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Appendices

1. Total Agri Advances Ratio of 20 selected Public Sector Banks

BANKS / YEARS	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Allahabad Bank	22.15	18.08	18.68	18.70	16.63	16.37	17.59
Andhra Bank	21.81	19.78	19.86	17.27	16.97	19.33	20.76
Bank of Baroda	19.73	20.07	19.78	18.63	18.35	13.59	14.01
Bank of India	19.73	18.47	15.70	16.06	13.88	15.15	19.68
Bank of Maharashtra	20.63	15.18	17.54	11.06	11.49	13.93	15.72
Canara Bank	18.39	19.01	18.55	18.48	15.84	18.22	22.89
Central Bank of India	21.16	18.53	21.30	17.91	14.32	16.32	18.17
Corporation Bank	11.78	11.05	13.58	6.76	7.48	9.42	13.13
Dena Bank	14.80	16.47	16.54	17.89	15.73	11.81	14.98
IDBI Bank Ltd.	7.20	10.06	11.67	10.79	9.31	4.69	7.93

Indian Bank	22.07	19.94	18.62	18.47	18.53	19.65	18.92
Indian Overseas Bank	19.62	18.55	17.89	21.87	18.41	18.34	18.60
Oriental Bank of Commerce	14.93	15.70	16.11	14.87	16.06	15.97	16.42
Punjab National Bank	20.27	19.72	19.53	19.33	19.53	13.85	19.74
Punjab & Sind BANK	20.41	16.13	20.50	18.30	10.66	11.40	15.58
Syndicate Bank	19.91	18.39	18.42	19.12	19.02	19.36	18.36
Union Bank of India	18.67	17.66	18.26	17.27	10.86	12.35	14.94
United Bank of India	14.01	13.74	13.32	13.36	14.84	19.72	13.77
UCO Bank	18.28	22.18	27.38	15.74	10.91	8.80	13.86
Vijaya bank	16.00	14.09	14.56	11.85	12.98	12.09	13.76

2. MSE Advances Ratio of 20 selected Public Sector Banks

BANKS / YEARS	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Allahabad Bank	8.55	9.24	13.92	16.74	17.40	15.34	15.86
Andhra Bank	9.32	9.67	10.51	11.27	11.72	14.40	13.71
Bank of Baroda	12.60	12.83	15.33	16.37	17.34	19.56	21.14
Bank of India	17.59	17.42	22.19	23.62	16.48	16.20	17.17
Bank of Maharashtra	9.34	8.92	10.59	16.11	15.96	19.73	19.81
Canara Bank	14.49	15.40	17.90	18.42	11.87	11.80	15.49
Central Bank of India	9.51	7.61	10.66	11.39	9.37	11.45	12.32
Corporation Bank	9.97	9.75	11.14	14.17	14.96	18.47	19.85
Dena Bank	13.65	13.21	14.55	16.65	15.73	16.00	17.77
IDBI Bank Ltd.	2.70	8.22	8.54	8.20	10.98	8.17	11.55
Indian Bank	11.19	10.06	12.17	12.69	11.07	12.74	13.09
Indian Overseas Bank	11.69	11.38	14.39	16.13	15.21	15.66	15.97
Oriental Bank of Commerce	11.38	10.09	15.08	17.91	18.25	18.70	20.30
Punjab National Bank	12.47	12.97	14.94	15.59	16.02	14.43	18.26
Punjab & Sind BANK	12.31	11.62	15.20	15.15	14.22	13.82	13.21
Syndicate Bank	9.46	9.75	13.60	15.07	14.64	14.41	14.62
Union Bank of India	12.45	12.24	15.36	14.15	11.57	14.73	16.44
United Bank of India	9.51	11.45	15.76	16.90	15.77	17.37	16.07
UCO Bank	10.20	15.16	17.59	16.59	15.54	15.07	22.04
Vijaya bank	12.41	12.93	14.07	13.86	14.60	14.31	15.04

3. Weaker Section Advances Ratio of 20 selected Public Sector Banks

BANKS / YEARS	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Allahabad Bank	10.79	10.08	10.46	10.54	10.30	10.01	10.02
Andhra Bank	11.75	14.15	13.48	12.33	10.77	11.75	13.99
Bank of Baroda	8.97	9.65	10.02	10.06	10.04	6.89	9.11
Bank of India	12.71	11.75	11.17	13.46	9.84	10.11	11.60
Bank of Maharashtra	7.17	6.35	6.19	6.39	5.97	8.31	9.72
Canara Bank	7.69	10.20	10.83	11.10	11.09	11.73	12.99
Central Bank of India	16.46	10.04	10.12	10.09	10.06	10.27	11.91
Corporation Bank	5.31	5.41	5.93	7.03	5.70	7.80	10.26
Dena Bank	6.27	6.25	7.02	7.53	8.13	7.14	6.93
IDBI Bank Ltd.	0.35	1.47	1.86	2.67	3.17	3.12	3.17
Indian Bank	13.06	10.68	10.67	10.21	10.26	10.93	11.01
Indian Overseas Bank	11.64	10.65	10.22	10.17	9.92	10.36	14.85
Oriental Bank of Commerce	5.20	5.47	6.00	7.27	9.01	10.31	10.77
Punjab National Bank	11.59	11.19	10.33	10.13	10.43	10.03	10.75
Punjab & Sind BANK	8.84	9.07	8.67	9.55	9.99	10.09	11.05
Syndicate Bank	10.34	10.59	10.52	10.74	12.06	11.45	10.63
Union Bank of India	7.42	8.38	9.61	10.10	6.31	9.17	10.53
United Bank of India	9.76	9.22	10.50	12.03	13.14	12.68	10.76
UCO Bank	8.83	11.38	12.76	10.39	7.75	9.47	11.94
Vijaya bank	6.20	9.51	9.65	9.08	8.62	9.51	10.21

A Study Of Influence Of Demographic Factors On Consumer Impulse Buying Behaviour

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Abstract

The main purpose of the paper is to understand the influence of the demographic variables like age, Gender and Income on consumer's impulse buying. This research paper consists of theoretical and research aspects of the same. The first part encompasses theoretical insights about organized retail and impulsive buying of Indian customers. To understand the impact of demographics variable a questionnaire was developed and responses from 475 respondents were taken using mall intercept method. To understand impact of various statistical techniques like Mann Whitney Test, Wilcoxon Test and K-s test were performed to test the hypothesis. The results depicted that as compared to males, females possess more impulsive buying nature. There are significant differences between Age and Impulsive Buying Tendency. Respondents belonging to age group of 20-30 years are having more impulsive buying tendency as compared to the other age group but there was no difference cited between income and IBT.

Key Words: Impulsive Buying, Demographics, Organized Retail

Introduction

The Indian retail industry is one of the fastest growing markets in the world due to economic growth of the country. It is a legend that it will amount to US\$ 950 billion by 2018, registering a Compound Annual Growth Rate (CAGR) of 8.9% during 2000-18. The escalation of this market is expected US\$ 22 billion from US\$ 3.1 billion (from 10% to more than 15%) during FY13-FY18.

India is the fifth largest preferred retail destination worldwide. This sector is experiencing exponential growth with retail development, not just in major cities and metros but also in Tier-II and Tier-III cities. Healthier economic growth, dynamically changing demographic profile, higher purchasing power, changing consumer tastes and preferences are the other factors responsible for escalating growth in the organized retail market in India.

These days retail business is experiencing huge challenges across the globe due to the frequent change in consumer tastes,

consumption patterns and buying behaviors. Strong marketing mix strategies are indispensable today for enduring sustainability of each retailer. In-Store marketing techniques such as point-of-purchase displays and promotions through background music, mannequin display, proximity of products are imperative in winning consumers and encouraging them to spend more. In-store promotions are usually intended at encouraging customers at the point of purchase through impetuous (unplanned) purchases.

Majority of the retailers are competent to produce the revenue through impulsive purchases due to their in-store tricks that stimulate their potential consumers through creating enjoyable, attractive and modern looking environments. Researchers also found that demographic variables like age, gender, marital status and income also play a vital role on impulsive buying.

Impulsive consumer buying is a widely recognized trend in the United States. It accounts for almost 80% of all purchases in certain product categories (Abrahams, 1997; Smith, 1996), and it has been suggested that purchases of new products are the consequences impulsive purchases than from prior planning (Siligoi, 1996). A study found that an estimated \$4.2 billion annual store sales were generated by impulse sales of items such as candy and magazines (Mogelonsky, 1998).

Impulse buying is defined as "a spontaneous purchase" that is characterized by relatively rapid decision-making and a subjective partiality in favor of immediate possession (Rook & Gardner, 1993, p. 3; see also Rook, 1987; Rook & Hoch, 1985). It is described as more exciting, less conscious and more alluring buying behavior compared to planned purchasing behavior. Highly impulsive buyers are likely to be more confused in their thinking, to be emotionally attracted to the object and to desire immediate pleasure (Hoch & Loewenstein, 1991; Thompson et al., 1990). These consumers often pay modest consideration to prospective negative consequences that may result from their actions (Hoch & Loewenstein, 1991; Rook, 1987; see also O'Guinn & Faber, 1989). Impulsive buying disrupts the normal

decision making models in consumer brains. The logical sequence of the consumer's action is replaced by an illogical moment of self satisfaction. Impulse items urge to the emotional side of consumers. Some items bought on wish are not considered functional or necessary in their lives.

Literature Review

• Impulsive Buying

Impulsive buying is defined by several researchers who gave various definitions of impulsive buying. Impulsive buying is a spontaneous decision to buy a product or service made just a minute before purchase. One who tends to make such purchases is referred as an impulsive purchaser or impulsive buyer. According to Rook (1985) 'Impulsive buying is a sudden, often powerful and persistent urge to buy something immediately'. "The wish to buy is hedonically complex and may stimulate emotional conflict; it is more emotional than rational" (Stern, 1962). Subdividing impulsive purchases into four categories like pure impulsive buying, suggestion impulsive buying, and reminder impulsive buying and planned impulsive buying. Pure impulsive buying appeals a spark or a desire to consume, which breaks a normal buying pattern and is considered as true impulsive buying. A novelty or escape purchase where an emotional reminder results from a predetermined need that was prompted upon encountering the item while shopping, for instance when the consumer sees an item that triggers a memory that their supply at home is low or completely consumed is termed as reminder impulsive buying. A suggested impulse buying occurs when a shopper sees an item for the first time and a desire to buy it arises without any prior knowledge of the product. Planned impulsive buying occurs when the shopper enters the store with some specific purchase in mind however the actual purchase depends upon price specials and coupon offers.

Demographic Factors

1. Gender

Helga Dittmar, Jane Beattie and Susanne Frieze(1995), investigated on gender identity, material symbols, Objects and decision considerations in impulsive purchases. They have presented a new model of impulsive buying based on a social constructionist theory which addresses that some of the shortcomings of previous models from economics are consumer behavior and psychology. Thus gender as a major social category influences both, the products bought impulsively and the buying considerations used.

Study suggested that men have tendency to impulsively buy instrumental and leisure items projecting independence and activity but women have tendency to buy symbolic and self-expressive goods concerned with appearance and emotional aspects of themselves. Michael Wood (1998) initiated that gender and impulsive buying are weakly related. Angela Hausman(2000) performed multiple correlation and ANOVA analysis to check the hypothesis from correlation analysis and found that impulsive buying tendency did not correlate with any of the demographic variables like age ,sex ,marital status and employment type. Tariq Jalees(2009) initiated that tendency for impulsive buying is gender specific, the level of impulsive buying in females is significantly higher than males.

2. Age

Muhammad Ali Tirmizi, Kashif-Ur-Rehman,M. and Iqbal Saif (2009) initiated in their research paper studied that young people more often get attracted to products displayed on store shelves and have greater tendency of showing impulse buying behavior. Results of this paper showed no association of impulsive buying in higher income group of young people having ambitious impulsive buying tendencies. Bellenger, Robertson & Hirshman (1978) gave a relationship between age and impulsive buying. As per their study, Impulsive buying tends to increase between the ages of 18 to 39 and then it declines thereafter. An inverse relationship was established between age and impulsive buying. It was also said that the relationship is non monotonic. Wood in 1998 said that Impulsive buying tendency is higher between age group of 18 to 39 and declines thereafter. In the year 2003 Mai N.T.T., Jung K., Lantz G and Loeb S.G. published a research paper entitled, "An Exploratory Investigation into Impulse Buying Behavior in a Transitional Economy: A Study of Urban Consumers in Vietnam". In this research paper they studied the impulse buying behaviors of the urban consumers of Vietnam. Cornelia Pechmann, Linda Levine, Sandra Loughlin and Frances Leslie (2005) reviewed basic research on adolescent development in neuroscience, psychology, and marketing. They found that adolescents are more impulsive and self-conscious than adults. Tariq Jalees(2009) concluded that the level of impulsive buying in younger age groups is significantly higher than older group. This finding was similar to the findings of Wood in 1998. Feng Xuanxiaoqing, Dong-Jenn Yang and Kuang Chuan Huang (2011) published their research paper, "A study of the factors that affect the impulsive cosmetics buying of female consumers in Kaohsiung" in which they established the relation between age and female consumer's impulsive purchases of cosmetics. In

their study, they found that females of over 41 years of age are more likely to intend to impulsive buying because they have a permanent salary and would be keen on spending money on themselves. Results of their study showed that their age and buying tendencies are significantly related to impulsive buying behaviors of Vietnamese consumers of same age.

3. Income

Kollat and Willet in 1967 reported that income never influences rate of spontaneous purchase. In 1936 Cobb and Hoyer stated that shopping lifestyle is defined as the behavior exhibited by consumers in response to the series of personal responses and opinions about the purchase of the product. They found that shopping lifestyle and impulsive buying behavior are closely related but only in the case of impulsive buyers. Sharon Beatty and Elizabeth Ferrell (1988) found that the relationship between availability of money, positive and negative impact leads to impulsive purchases. They reported that having money or financial resources increases chance for impulsive purchases and positive feelings. They found that money had inverse relationship with negative effect. Mai N.T.T., Jung K., Lantz G. and Loeb S.G(2003) in their research paper entitled, "An Exploratory Investigation into Impulse Buying Behavior in a Transitional Economy: A Study of Urban Consumers in Vietnam" , studied about the impulsive buying behavior of the urban consumers of Vietnam. The finding of their study was that Income is significantly related to impulsive buying behaviors of Vietnamese consumers. Feng Xuanxiaoling, Dong-Jenn Yang and Kuang Chuan Huang(2011) published their research paper "A study of the factors that affect the impulsive cosmetics buying of female consumers in Kaohsiung" which was clearly based on the study of the relation between Income and female consumer's impulsive purchases of cosmetics. In this paper they have concluded that Income did not make any difference in impulse buying tendency.

4. Education

Feng Xuanxiaoling, Dong-Jenn Yang and Kuang Chuan Huang (2011) in their research paper "A study of the factors that affect the impulsive cosmetics buying of female consumers in Kaohsiung" tried to study the relation between Education and female consumers' impulsive purchases of cosmetics. In this research they have found that education did not make a difference to impulse buying intention

5. Occupation

Feng Xuanxiaoling, Dong-Jenn Yang and Kuang Chuan Huang (2011) published their research paper namely "A study of the

factors that affect the impulsive cosmetics buying of female consumers in Kaohsiung", in which they established the relation between occupation and Impulsive purchases of cosmetics by female consumers.

Objectives of the Study

1. To identify the percentage of people who prefer to purchase products impulsively.
2. To study the variety of products purchased impulsively.
3. To identify the impact of demographic variables like age, Income and gender on urge for impulsive buying in organized retail store.

Hypothesis for the study

- H_{0c}: There are no significant differences between gender and impulsive buying tendency.
- H_{1c}: There are various significant differences between gender and impulsive buying tendency.
- H_{0a}: There are no significant differences in age and impulsive buying tendency.
- H_{1a}: There are significant differences in age and impulsive buying tendency.
- H_{0i}: There are no significant differences between income and impulsive buying tendency.
- H_{1i}: There are significant differences between income and impulsive buying tendency.

Research Methodology

A descriptive research was conducted in the study and the data was collected using Mall Intercept survey method. Non-probability sampling technique and quota sampling technique were used for the same. A structured questionnaire was developed and was distributed to 475 respondents to study the influence of demographic factors on impulsive buying. Before finalizing, the questionnaire opinion of experts was taken and it was followed by a pilot survey of 25 respondents of Ahmedabad. SPSS software was used for analyzing data. Various statistical tests like Kruskal-wallis test, Mann Whitney U test and K-S test was performed to study the differences in IBT according to demographics.

Analysis and Interpretation
Demographic Study for Impulsive Buying

Table 1: Demographic Profile			
		Frequency	Percentage
Gender	Male	247	52
	Female	228	48
	Total	475	100
Age	20 to 30 Years	221	46.5
	31 to 40 Years	148	31.2
	40-50 Years	63	13.3
	>50 years	43	9.1
	Total	475	100
Income	less than 3 Lac	188	39.6
	3-5 Lac	172	36.2
	5-10 Lac	80	16.8
	> 10 Lac	35	7.4
	Total	475	100
Marital Status	Married	311	65.5
	Unmarried	164	34.5
	Total	475	100

(Source: Primary data)

Impulsive Buying Tendency Vs. Gender

To study differences in impulsive buying tendencies amongst males and females, first normality of the data was checked using K-S test. The result of K-S Test is mentioned in the table no.2. To study the normality according to gender, first, split the file function was performed in SPSS and then K-S Test is performed. For K-S Test null hypothesis is data and is normally distributed but alternative hypothesis data was not normally distributed. P- Value for Male (0.00) and for Females (0.04) was less than 0.05. Hence, null hypothesis was accepted and alternative hypothesis was rejected that shows data was not normally distributed.

Table 2: One-Sample Kolmogorov-Smirnov Test			
Gender			
MALE	N		247.00
	Normal Parametersa	Mean	2.45
		Std. Deviation	0.48
	Most Extreme Differences	Absolute	0.14
		Positive	0.14
		Negative	-0.08
	Kolmogorov-Smirnov Z		2.16
	Asymp. Sig. (2-tailed)		0.00

FEMALE	N		228.00
	Normal Parametersa	Mean	2.54
		Std. Deviation	0.46
	Most Extreme Differences	Absolute	0.09
		Positive	0.09
		Negative	-0.07
	Kolmogorov-Smirnov Z		1.40
	Asymp. Sig. (2-tailed)		0.04

a. Test distribution is Normal.

(Source: Primary data)

Parametric test is based assumption that data should be normally distributed but as per result of K-S test, data was not normally distributed. Hence, assumption for parametric test is not satisfied. To study the difference in impulsive buying tendencies amongst males and females nonparametric Mann – Whitney U test was performed.

Table 3 :Ranks				
	Gender	N	Mean Rank	Sum of Ranks
Total_ibt	MALE	247	222.8623482	55047
	FEMALE	228	254.3991228	58003
	Total	475		

(Source: Primary data)

Table 4: Test Statistics	
	Total_ibt
Mann-Whitney U	24420.00
Wilcoxon W	55050.00
Z	-2.511
Asymp. Sig. (2-tailed)	0.012
a. Grouping Variable: Gender	

Table 4 shows statistics for Mann Whitney U test gave significant value 0.012 which is less than 0.05. Hence, hypothesis H10 was rejected. Hence, there was significant difference between gender and impulsive buying tendency. Females are having more impulsive buying tendencies as compared to males.

Impulsive Buying Tendency Vs Age

To study differences between impulsive tendencies amongst various age groups. First normality of the data was checked using K-S test. Statistics for the K-S test is mentioned in the table 5. To study the normality according to age, first, split file function was performed in SPSS and then K-S Test was performed for various age groups. For K-S test, null hypothesis is data and is normally

distributed but alternative hypothesis is data was not normally distributed. Hence, P- Value for age group between 20-30 years is 0.02 and 31- 40 is 0.007 which was less than 0.05 Hence, null hypothesis for age group 20-30 years and 31- 40 years was rejected and alternative hypothesis was accepted. So, for age group 20-30 and 31-40 data was not normally distributed. Further, for age group 41- 50 years significant value was 0.28 and for age group >50 Years significant value was 0.68 which is greater than 0.05. Hence, for Age group 41- 50 years and > 50 Years null hypothesis was accepted. So, for age group 41-50 years and greater than 50 years data was normally distributed. To perform parametric test data should be normally distributed. Here data for age group 20- 30 years and 31- 40 years was not normally distributed so assumption for the parametric test was not satisfied.

Table 5: One-Sample Kolmogorov-Smirnov Test

age			
20-30 years	N		221
	Normal Parametersa	Mean	2.50
		Std. Deviation	0.45
	Most Extreme Differences	Absolute	0.10
		Positive	0.10
		Negative	-0.05
	Kolmogorov-Smirnov Z		1.49
31-40 Years	Asymp. Sig. (2-tailed)		0.02
	N		148
	Normal Parametersa	Mean	2.45
		Std. Deviation	0.49
	Most Extreme Differences	Absolute	0.13
		Positive	0.13
		Negative	-0.08
41-50 Years	Kolmogorov-Smirnov Z		1.66
	Asymp. Sig. (2-tailed)		0.007
	N		63
	Normal Parametersa	Mean	2.55
		Std. Deviation	0.53
	Most Extreme Differences	Absolute	
		Positive	0.12
>50 Years		Negative	-0.08
	Kolmogorov-Smirnov Z		0.98
	Asymp. Sig. (2-tailed)		0.28
	N		43
	Normal Parametersa	Mean	2.48
		Std. Deviation	0.47
	Most Extreme Differences	Absolute	0.11
		Positive	0.11
		Negative	-0.08
	Kolmogorov-Smirnov Z		0.75
	Asymp. Sig. (2-tailed)		0.61

a. Test distribution is Normal.

(Source: Primary data)

To study the differences in impulsive buying tendencies according to age Kruskal wallis non parametric test was performed. Statistics for the Kruskal wallis test is shown in the Table 6 and 7

Table 6 : Ranks

	Age	N	Mean Rank
ibt	20-30 Years	221	218.49
	31-40 years	148	244.86
	41-50 Years	63	273.73
	>50 Years	43	262.33
	Tota	475	

Table 7: Test Statistics

	Total_ibt
Chi-Square	10.53
Df	3
Asymp. Sig.	0.014
a. Kruskal Wallis Test	
b. Grouping Variable: age	

(Source: Primary data)

Table 7 shows statistics for Kruskal Wallis test, the significant value 0.014 is less than 0.05. Hence, null hypothesis H₂₀ was rejected. Hence, there are significant differences between age and impulsive buying tendencies.

Impulsive Buying Tendency Vs. Income

To study the differences between impulsive buying tendencies amongst various income groups, first, normality of the data was checked using K-S test. Statistics for the K-S test is mentioned in the table 8. To study the normality according to income, first, split file function was performed in spss and then K-S test was performed for various income groups. For K-S test Null Hypothesis is data and is normally distributed but alternative hypothesis was data and was not normally distributed. P- Value for income group is less than 3 Lac which was 0.01, between 3-5Lac was 0.03 and between 5-10Lac was 0.01 which was less than 0.05. Hence, Null Hypothesis for income group less than 3, between 3- 5 and between 5-10Lac were rejected but alternative hypothesis was accepted. So, for income group less than 3 Lac,

3-5 Lac and 5- 10Lac were not normally distributed. Further, for income group greater than 10Lac significant value was 0.40 which was greater than 0.05. Hence, for income group > 10Lac null hypothesis was accepted, so, for income group > 10Lac data was normally distributed. To perform parametric test data of all the groups should be normally distributed. Here data for income less than 3Lac, between 3- 5Lac and between 5- 10Lac were not normally distributed so assumption for the parametric test was not satisfied.

Table 8 : One - Sample Kolmogorov - Smirnov Test

Income			
less than 3 Lac	N		188.00
	Normal Parameters ^a	Mean	2.50
		Std. Deviation	0.44
	Most Extreme Differences	Absolute	0.12
		Positive	0.12
		Negative	-0.07
	Kolmogorov-Smirnov Z		1.66
	Asymp. Sig. (2-tailed)		0.01
3 -5 lac	N		172.00
	Normal Parameters ^a	Mean	2.44
		Std. Deviation	0.46
	Most Extreme Differences	Absolute	0.11
		Positive	0.11
		Negative	-0.06
	Kolmogorov-Smirnov Z		1.45
	Asymp. Sig. (2-tailed)		0.03
5-10 lac	N		80.00
	Normal Parameters ^a	Mean	2.53593
			.75
		Std. Deviation	0.58
	Most Extreme Differences	Absolute	0.17
		Positive	0.17
		Negative	-0.10
	Kolmogorov-Smirnov Z		1.57
	Asymp. Sig. (2-tailed)		0.01

> 10 lac	N		35.00
	Normal Parameters ^a	Mean	2.65
		Std.	0.47
	Most Extreme Differences	Deviation Absolute	0.15
		Positive	0.15
		Negative	-0.13
	Kolmogorov - Smirnov Z		0.89
	Asymp. Sig. (2-tailed)		0.40
a. Test distribution is Normal.			

(Source: Primary data)

To study the differences in impulsive buying tendencies according to income, Kruskal wallis non parametric test was performed. Statistics for the Kruskal wallis test is shown in the Table 9 and 10.

Table 9: Ranks

	Income	N	Mean Rank
Total_ibt	less than 3 Lac	188	242.79
	3 - 5 lac	172	222.89
	5 - 10 lac	80	236.4
	>10 lac	35	290.16
	Total	475	

Table 10: Test Statistics^a

	Total_ibt
Chi-Square	7.434
Df	3
Asymp. Sig.	0.057
a. Kruskal Wallis Test	
b. Grouping Variable: Income	

Table 10 shows statistics for Kruskal Wallis test, with significant value 0.057 which was greater than 0.05. Hence, null hypothesis H30 was accepted. Hence, there were no significant differences amongst income and impulsive buying tendencies.

Conclusion and Limitations

This study focuses on influence of demographics on impulsive buying of consumers. This study identified differences between impulsive buying tendencies (IBT) amongst males and females. Females have more IBT as compared to males. Further, the difference in IBT as per age has been specified. Also there is no difference in IBT according to income is found. Limitations for research are that study was conducted in Ahmedabad city with 475 sample sizes and hence, these results cannot be generalized. Also the biasness amongst the respondents may deviate the findings.

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A Comparative Study of Customer satisfaction in Three different supermarkets in Vadodara city

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Abstract

Customer satisfaction is a marketing term that measures how products or services supplied by a company meet or surpass a customer's expectation. Customer satisfaction is important because it provides marketers and business owners with a metric that they can use to manage and improve their businesses. The present research paper is the study of customer satisfaction in the three different format of supermarket, namely Reliance fresh, D-Mart and Big-bazaar. It aims to find out, which supermarket is providing highest level of satisfaction to its consumers. Result of the study shows that customer satisfaction is almost same in all the three formats.

Key Words: Customer Satisfaction, Supermarket

Introduction

Supermarket shopping is generally categorised as a self-service in the retail environment. For supermarket retailers wanting to build good relationships with their customers, should be able to track their levels of 'satisfaction' with the key elements of the supermarket environment is really important. From the retailer's perspective, their aim is to minimise the reasons for customer complaints and dissatisfaction and the cost of a service recovery plan (McCollough, Berry and Yadav, 2000) along with establishing a track of direct feedback from customers about their reactions to those defined key elements.

Satisfaction is defined as a consumer's post-purchase evaluation of the overall service experience. It is an affective reaction (Menon and Dubé, 2000) in which the consumer's needs, desires and expectations during the course of the service experience have been measured with relation to met or exceeded (Lovelock, 2001). Satisfaction in this sense could mean that any supermarket has just barely met the customer's expectations, not exceeded nor disappointed those expectations. The benefits of taking the customer's response beyond satisfaction at this level by exceeding expectations, is a competitive strategy many retailers aspire to achieve these days.

Customer satisfaction has become a primary point of differentiation in a market where consumers typically make a weekly/weekend trip to their preferred supermarket and spend more on this weekend trip than at other times (Kahn and McAlister, 1997).

There lies a strong competition in the different formats of supermarkets. This study is designed to investigate customers' satisfaction levels with a range of key elements. Factors of particular interest in a retail supermarket environment are Physical appearance of the supermarket, availability and variety of products, prices, sales promotion schemes, meeting customer expectations, pleasant shopping experience and service quality.

Review of Literature

Kotler, (1973) developed a systematic exposition of "atmosphere" as a buying influence. The term atmospherics is defined by Kotler, (1973) as the effort to design buying environments to produce specific emotional effects in the buyer that enhance his/her purchase probability. Atmosphere is experienced through the senses, primarily sight, sound, scent, and touch.

(Bitner, 1992) used the term service scapes to describe the idea of "atmospherics" in a service setting. Service scapes also add the notion of the service personnel to physical setting. The service scape is described as physical layout of the service facility, ambience, background music and all in the store. The service scape can also affect customer's impressions of and satisfaction with service (Lovelock, Patterson and Walker, 2001).

Service quality or desired expectations are defined as a blend of what the customer believes can be and should be in a retail set-up (Zeithaml and Bitner 1996). Service quality can be measured by a level of discrepancy between consumer expectations or desire and their perceptions of what they received as described by the SERQUAL scale (Bebko, 2000).

Customer satisfaction occurs only when the value and customer service provided through a retailing experience meet or exceed

consumer expectations. If the expectations of value and customer service are not met generally the consumer will be dissatisfied. Unfortunately for retailers, most consumers do not complain when dis-satisfied, they just shop elsewhere for their need fulfilment Jackson, 1999). Retailers should always keep in mind that customer expectations move continuously upward and that it's only satisfied customers are likely to remain loyal in the long run.

Objectives

1. To study the overall customer satisfaction in the three different formats of supermarkets.
2. To study the impact of various demographic characteristics (age, gender, qualification, family income, education, marital status, frequency of visiting the store, monthly expenditure) on the customer satisfaction.

Research Methodology

- Sampling method : Non-Probabilistic convenience sampling method
- Research Design : Descriptive
- Sample Size : 90 Consumers
- Sampling Instrument: Structured Questionnaire

This research is carried out in Vadodara city. Three formats of supermarkets covered under the study are, Reliance Fresh, D-mart and Big-Bazaar. From each store 30 sample were collected. Total twenty nine questions(28 questions for measuring satisfaction + 1 question for finding overall satisfaction) were kept in the questionnaire for measuring customer satisfaction , based on 5 point likert scale , ranging from 1 to 5 , where 1 was highly dis-satisfied , and 5 was highly-satisfied. Nine questions were used to collect the demographic data from the customers such as age, gender, marital status, education, occupation, family income, family size, frequency of visiting the store, monthly grocery buying to see their impact on the overall satisfaction.

Reliability Test: Reliability test is performed on the questionnaire, on all 29 questions. All the scales had reliabilities above .75, which exceeds the recommended level of .7 (Nunnally1978). The respondents were asked to rate the importance of each item and then to rate how satisfied they were with that particular item as provided by the retailer.

Reliability Statistics	
Cronbach's Alpha	N of Items
.945	29

Statistical Analysis

Impact of Demographic characteristics on Customer Satisfaction (Objective No.2)

Impact of Age on overall customer satisfaction

H_0 : There is no statistical difference in the means of age groups and overall satisfaction

H_1 : There is a statistical difference in the means of age groups and overall satisfaction

Table 1 : Ranks

	Age	N	Mean Rank
Overall satisfaction	Below 20	2	28.50
	21-30	35	45.81
	31-40	19	44.92
	41-50	18	51.67
	Above 50	16	40.69
	Total	90	

Table 2 : Test Statistics^{a,b}

	Overall Satisfaction
Chi-Square	5.437
df	4
Asymp. Sig (p value)	.245

a. Kruskal Wallis Test. Grouping Variable: Age Interpretation of Statistical test (Source: Primary data)

If p value is < .05 then null hypothesis is rejected. Here p value is .245, which is much higher than .05, so null hypothesis is accepted and it can be concluded that age of the customer does not impact their satisfaction level.

Impact of Education on overall customer satisfaction

H_0 : There is no statistical difference in the means of education groups and overall satisfaction

H_1 : There is a statistical difference in the means of education groups and overall satisfaction

Table 3: Ranks

	Education	N	Mean Rank
Overall Satisfaction	Undergraduate	4	69.00
	Graduate	43	44.34
	Post Graduate	38	42.79
	Professional	5	57.30
	Total	90	

Table 4 : Test Statistics^{a,b}

	Overall Satisfaction
Chi-Square	10.731
df	3
Asymp. Sig. (p value)	.013

a. Kruskal Wallis Test

b. Grouping Variable: Education; (Source: Primary data)

Interpretation: Here p value is .013, which is much less than .05, so null hypothesis is rejected and it can be concluded that education has significant impact on overall customer satisfaction. Table no. 3 shows highest mean value is for undergraduates, which indicates that undergraduates are more satisfied.

Impact of Occupation on the customer satisfaction

H₀: There is no statistical difference in the means of occupation groups and overall satisfaction

H₁: There is a statistical difference in the means of occupation groups and overall satisfaction

Table 5 : Ranks

	Occupation	N	Mean Rank
Overall Satisfaction	student	20	43.20
	Govt. service	13	55.50
	Private Service	26	41.31
	Self Employed	14	46.50
	Housewife	15	48.90
	others	2	25.50
	Total	90	

Table 6 : Test Statistics^{a,b}

	Overall Satisfaction
Chi-Square	9.433
df	5
Asymp. Sig. (p value)	.093

a. Kruskal Wallis Test

b. Grouping Variable: Occupation; (Source: Primary data)

Interpretation: Here p value is .093, which is much greater than .05, so null hypothesis is accepted. It can be concluded that occupation of the customer does not impact customer satisfaction.

Gender

H₀: There is no statistical difference in the means of gender and overall satisfaction

H₁: There is a statistical difference in the means of gender and overall satisfaction

Mann-Whitney Test**Table 7 : Ranks**

	Gender	N	Mean Rank	Sum of Ranks
Overall Satisfaction	male	50	43.44	2172.00
	female	40	43.08	1923.00
	Total	90		

Table 8 : Test Statistics^a

	Overall Satisfaction
Mann-Whitney U	897.000
Wilcoxon W	2172.000
Z	-1.257
Asymp. Sig. (2-tailed) p value	.209

a. Grouping Variable: Gender

Interpretation: Here p value is .209, which is much greater than .05, so null hypothesis is accepted. It can be concluded that gender has no impact on overall customer satisfaction.

Marital Status

H₀: There is no statistical difference in the means of marital status and overall satisfaction

H₁: There is a statistical difference in the means of marital status and overall satisfaction

Mann-Whitney Test**Table 9 : Ranks**

	Marital Status	N	Mean Rank	Sum of Ranks
Overall Satisfaction	married	60	47.05	2823.00
	unmarried	30	42.40	1272.00
	Total	90		

Table 10: Test Statistics^a

	Overall Satisfaction
Mann-Whitney U	307.000
Wilcoxon W	1272.000
Z	-1.196
Asymp. Sig. (2-tailed) p value	.232

a. Grouping Variable: Marital_Status; (Source: Primary data)

Interpretation: Here p value is .232, which is much greater than .05, so null hypothesis is accepted. It can be concluded that gender has no impact on customer satisfaction.

Family Size

H₀: There is no statistical difference in the means of Family Size and overall satisfaction

H₁: There is a statistical difference in the means of Family size and overall satisfaction

Kruskal-Wallis Test

Table 11: Ranks

	Family_Size	N	Mean Rank
Overall Satisfaction	1 - 2 members	4	49.50
	3 - 4 members	60	44.30
	5 - 6 members	24	51.00
	7 and above	2	7.50
	Total	90	

Table 12: Test Statistics^{a,b}

	Overall Satisfaction
Chi-Square	12.458
df	3
Asymp. Sig. (p value)	.006

a. Kruskal Wallis Test

b. Grouping Variable: Family_Size; (Source: Primary data)

Interpretation: Here p value is .006, which is much less than .05, so null hypothesis is rejected. It can be concluded that family size impacts the overall customer satisfaction. From table no. 11, highest mean value is 51, so it can be concluded that highest level of the satisfaction prevails in the 5-6 member families.

Family Income

H₀: There is no statistical difference in the means of Family income and overall satisfaction

H₁: There is a statistical difference in the means of Family income and overall satisfaction

Kruskal-Wallis Test

Table 13: Ranks

	Family_Income	N	Mean Rank
Overall Satisfaction	below 15,000	1	49.50
	15000 - 30000	22	45.41
	30000 - 45000	29	49.40
	45000 - 60000	26	42.46
	60,000 & above	12	42.50
	Total	90	

Table 14: Test Statistics^{a,b}

	Overall Satisfaction
Chi-Square	2.663
df	4
Asymp. Sig. (p value)	.616

a. Kruskal Wallis Test

b. Grouping Variable: Family_Income; (Source: Primary data)

Interpretation: Here p value is .616 which is much greater than .05, so null hypothesis is accepted. It can be concluded that family income has no impact on the customer satisfaction.

Table 15: Summarized view of Impact of Demographic Characteristics on Overall Satisfaction

Sr. No	Demographic Characteristic	Null Hypothesis	p value	is p value < 0.05	Null_Hypothesis (Accepted/Rejected)	Interpretation
1	Age	There is no statistical difference in the means of age groups and overall satisfaction	.245	NO	Accepted	Age has no impact on customer satisfaction

2	Education	There is no statistical difference in the means of Education and overall satisfaction	.013	YES	Rejected	Education level impacts customer satisfaction
3	Occupation	There is no statistical difference in the means of Occupation and overall satisfaction	.093	NO	Accepted	Occupation has no impact on customer satisfaction
4	Gender	There is no statistical difference in the means of Gender and overall satisfaction	.209	NO	Accepted	Gender has no impact on customer satisfaction
5	Marital status	There is no statistical difference in the means of Gender and overall satisfaction	.232	NO	Accepted	Marital status has no impact on customer satisfaction
6	Family Size	There is no statistical difference in the means of Family size and overall satisfaction	.006	YES	Rejected	Family size has an impact on customer satisfaction
7	Family Income	There is no statistical difference in the means of Family Income and overall satisfaction	.616	NO	Accepted	Family income has no impact on customer satisfaction

(Source : Authored based on Primary data)

Overall Satisfaction in three Different formats(objective no.1)

Hypothesis

H₀: There is no difference in the means of three different supermarkets

H_a: There is a difference in the means of three different supermarkets

Kruskal-Wallis Test

Table 16: Ranks

	Name_of_Store	N	Mean Rank
Overall Satisfaction	Big_bazaar	30	42.50
	Reliance_fresh	30	43.40
	D-mart	30	50.60
	Total	90	

Table 17: Test Statistics^{a,b}

	Overall Satisfaction
Chi-Square	3.914
df	2
Asymp. Sig.	.141(p value)

a. Kruskal Wallis Test

b. Grouping Variable: Name_of_Store

Interpretation: Here p value is .141 which is much greater than .05, so null hypothesis is accepted. It can be concluded that overall customer satisfaction in all three formats does not vary much.

Conclusion: from statistical analysis it can be concluded that

- Customer satisfaction does not vary in the three stores (Reliance Fresh, D-Mart, Big-Bazaar) in Vadodara city.
- Some demographic characteristics have a significant impact on the customer satisfaction such as education and family size.
- Other demographic characteristics such as age, occupation, gender, marital status, family income do not impact overall customer satisfaction.

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Assessment Center at Vardhman : Gauging Potential for Growth

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Abstract

Today in a globally competitive market, having competitive people is imperative. Assessment Centers facilitate organizations identify and develop these competent people and have thus become the need of the day. For years, assessment centers have remained a popular approach for finding and developing managerial and non-managerial workforce (Robie et al., 2000). Present paper describes the process and methodology followed by Vardhman Textiles Limited (Vardhman), one of the largest textiles conglomerates in India. It also discusses encouraging endeavours of Vardhman in this area which makes it a robust company following contemporary approach and that too by adding its own flavor to make it little different without spoiling the true essence. Information was collected using Observation method. Author observed the manner in which activities were carried out and then the methodology involved for evaluating the participants by sitting in the sessions conducted at VTDC (Vardhman Training and Development Center). Also, the author interviewed the assessment center coordinator of Vardhman to get more valuable information and clarification.

KeyWords: Assessment Center, Competency

Introduction to Assessment Centers

Today in a globally competitive market, having competitive people is imperative. Strategic intent aligned with market needs can only be successful if organizations are able to manage their talent house. Assessing the performance and potential of the human resource is vital to the survival. Assessment Centers (hereafter AC) facilitate organizations identify and develop these competent people and have thus become the need of the day. According to Terpak (2008) "The AC is an examination process that is designed to simulate situations that are common to the rank being tested. Each exercise is designed to measure knowledge, skills, abilities and personal characteristics of the individual candidate in a given situation". (pp.1)

AC was first used by the German military for the purpose of selecting officers. The need to select the best individuals sprang

from the restrictions imposed by the Peace Treaty of Versailles, which ended the world war, limited the number of German soldiers (Sawardekar, 2002). However, it made an entry into the business sector after a longitudinal study which was conducted at American Telephone and Telegraph Company that used assessment center methods to obtain data on managers in order to establish that work-simulated testing can be used to predict actual work performance (Coleman, 2010). In an assessment center, candidates, who participate in various simulation exercises, are evaluated by multiple trained assessors on job-related dimensions. For years, assessment centers have remained a popular approach for finding and developing managerial and non-managerial workforce (Robie et al., 2000). A typical assessment center requires participants to complete several simulations that test two or more performance dimensions. Job analysis is used to develop both the simulations and the performance dimensions to ensure their job-relatedness. As Lowry (1991) puts, "Assessors observe the behavior of the participants, and ultimately pool their observations, evaluate the behaviors, and provide a score for related performance dimensions." Present paper describes the process and methodology followed by Vardhman Textiles Limited (Vardhman). It also discusses encouraging endeavours of Vardhman in this area which makes it a robust company following contemporary approach and that too by adding its own flavor to make it little different without spoiling the true essence. Information was collected using Observation method. Author observed the manner in which activities were carried out and then the methodology involved for evaluating the participants by sitting in the sessions conducted at VTDC (Vardhman Training and Development Center). Also, the author interviewed the assessment center coordinator of Vardhman to get more valuable information and clarification.

Vardhman Group of Companies

Vardhman Group is a leading textile conglomerate in India having a turnover of \$700 mn. Spanning over 24 manufacturing facilities in five states across India, the Group business portfolio includes

Yarn, Greige and Processed Fabric, Sewing Thread, Acrylic Fibre and Alloy Steel. Vardhman Group manufacturing capacities include over 3,00,000 spindles, 65 tons per day yarn and fibre dyeing, 900 shuttleless looms, 90 mn meters per annum processed fabric, 33 tons per day sewing thread, 18000 metric tons per annum acrylic fibre and 100,000 tons per annum special and alloy steel. Vardhman has evolved through history from a small beginning in 1965 into a modern textile major under the dynamic leadership of its chairman, Padma Bhushan S.P.Oswal. His vision and insight has given Vardhman an enviable position in the textile industry. Under his leadership, Vardhman is efficiently using resources to innovate, diversify, integrate and build its diverse operations into a dynamic modern enterprise. One of the few 'AA' rated (by CRISIL) companies in the Indian textile industry, it market products across 58 countries; 38.35% of 2013-14 revenues were derived from international geographies. Vardhman has a workforce of more than 23,000 employees. It is amongst the largest Yarn producer in India, amongst the largest manufacturer & exporter of Cotton Yarn from India, one of the largest consumers of raw cotton in the country. It has emerged as leader in Hand Knitting Yarn and second largest producer of Sewing Threads. Back home, the Vardhman Group became India's first textile company to be awarded ISO9002/ ISO 14002 Certification. Its financial performance is the testimony that it is able to manage its talent judiciously (Annexure 1).

Vardhman's HR philosophy

Across the boundaries of time and space, the best transmission and perseverance of culture, values and philosophy is only through the hearts of people. Employees in Vardhman are its most valuable resource and development of business and of employees must go hand in hand. Every employee is special and unique in his own field and has infinite potential to make contribution to the organisation. Merit is the most important criteria for recruitment and reward. Creativity and innovation in technology and management through its people is its competitive edge. HR processes facilitate consistent improvement in performance, productivity and effectiveness through mutually agreed stretched targets. It continuously strives to improve quality of work-life for total job satisfaction and social harmony for the employees. HR prepares people to accept and adapt to change and learning as a way of life. HR promotes high standards of discipline at the workplace and compliance with the laws of the land. It prepares youth for executive role in business as a major social responsibility.

(Source: Company website)

Process of Assessment Centre followed at Vardhman Group

In an assessment center group of participants take part in a variety of exercises observed by a team of trained assessors who evaluate each participant against a number of predetermined, job related behaviors. Judgment is then made by combining the data. Vardhman group started using Assessment Centers in the year 2010 for finding and developing the potential for future higher roles. All the steps which are performed in an assessment center are divided into three phases:

1. Pre - AC Phase
2. During - AC phase
3. Post - AC phase

Pre – Assessment Center Phase

1. **Define the objective of AC:** Objective of AC in Vardhman is to assess and develop the individuals in order to prepare them for future responsibilities.
2. **Identify the participants to be called for AC:** Incumbents at officer and executive levels (Annexure:2) who score 7 or above as their overall performance appraisal score and who have been identified by their immediate boss as employees with promotional potential are called to participate in an AC.
3. **Make Infrastructural Arrangements:** With a view to enhance their skills, Vardhman continuously train its people across all functions, levels and disciplines of the organisation. It conducts an array of training and development programmes that help in the technical, managerial and behavioral growth of its employees. A full-fledged training center -Vardhman Training and Development Center (VTDC) at Ludhiana has been set up for this purpose. Residential facility, well stocked library and tranquil green expansive lawns just provide the right environment conducive for learning.
4. **Define the competencies to be evaluated and identify the exercises for evaluating these competencies:** In total participants are evaluated on around eleven competencies measured through various exercises like In-basket exercises, group discussions, management games etc. This enables the observers to unveil the presence or absence of certain competencies. Exercises like Case study, In-Basket, Group discussion, experiential exercise like Japanese Delegates and Town Building, book presentations etc. are carried out. At the end there is an interaction of participants on one – to – one basis with the senior authorities of Vardhman. At VTDC, various exercises measure different competencies. Competencies like

communication skills and influencing skills are measured through Group discussion whereas planning and organizing skills are evaluated through experiential exercises.

5. Identify the observers and train the observers: In the words of Knapp and Mujtaba (2011), "A highly qualified team of assessors is of utmost importance to the success of any assessment center. It is well established that assessors should be supervisors/managers at least one level above the position being selected for and across all disciplines or departments." and therefore, they suggested using in-house personnel for better results. In VTDC, where AC functions, types of observers can be classified into three categories:- a) Outside professionals b) Senior managers from within the company c) VTDC executives who are neutral and trained professionals in their area.

6. Decide the rating methodology: Participants are evaluated on a rating scale for various competencies. Scales are used to assess individuals on variety of parameters. Explanation of range of marks on a continuum is provided to the assessors so that all assessors have a common understanding of the degree of scores. Indicators related to each competency are well defined. This ensures evenness in understanding among assessors.

7. Schedule the Assessment Center and inform the concerned people of the schedule: Normally the AC programme is of six days from 9 am uptill 6 pm. Mails are sent to the concerned department from where participants are to come. Also, books on which candidates will be required to give presentations are sent to them atleast one month before the commencement of programme so that they can read and prepare themselves for presentation.

During - Assessment Center Phase

1. Acquainting the participants: After a brief welcome, an ice-breaker exercise is used to make the participants feel comfortable. Participants are explained the purpose of the AC, the procedure it would follow and its expected outcome. They are acquainted with the schedule of six days but all this is done briefly.

2. Give instructions to the participants, before every exercise: Before the execution of any exercise, instructor gives the necessary direction in detail and allows the participants to function. Instructor keeps observing them perform and note their behavior which is eventually translated into scores.

3. Distribute the evaluation sheets among observers: As discussed above, exercises are designed to measure specific competencies. And therefore, the observers are given the

evaluation sheet having a detail of competencies to be measured. Assessors give scores keeping in mind the meaning of competency and range of scores for each point on the scale as laid down.

4. Conduct all exercises: Exercises are executed according to the schedule. Observers keep filling the evaluation sheet simultaneously or immediately after the exercise. In the interaction session, participants interact with senior authorities of Vardhman whereby their response and behavior is noted while they answer questions related to job, hypothetical situations, ambition etc.

5. Conduct a discussion of all observers on every participant's ratings at the end of the session: Group opinion about individuals can produce better understanding. Just to have a confirming opinion about a candidate, discussion among observers is held at the end of exercises.

6. Get feedback from participants about the conduct of AC: Feedback forms are given at the end of the programme to the participants. There are two segments of the form: a) Feedback regarding the programme as such i.e. its relevance in terms of its utility in telling them their strengths and improvement areas, content of the lectures etc. b) Feedback regarding the administrative aspects like quality of food arrangements etc.. The feedback form is designed to elicit response on a five point rating scale (from 1- very poor upto 5- excellent).

Post - Assessment Center phase:

1. Make a final report: Compile various reports/evaluation sheets of different exercises prepared by different observers and make a final report of the strengths and improvement areas of each participant.

2. Submit them to the concerned authorities: The reports prepared by the compiling assessor are discussed with the Chairman and then these are sent to the concerned HODs for their perusal. Meetings of HODs and coordinator (VTDC) are held to discuss the report of their subordinates. Respective HODs utilize the inputs received to develop a future course of action.

3. Make improvements in the design according to the recommendations: An effort is made to incorporate valid suggestions and modify the system based on inputs received from the feedback taken from participants.

Encouraging Endeavours

Following points were observed which give encouragement to continue with this resilient endeavour:

1. Different style of In-Basket exercise: In a traditional in-basket exercise, participants are asked to read the entire material to understand the situation and the role of protagonist. Based on their understanding, they are supposed to write their actions in that situation respectively. But, this way the participant will never come to know how the other party is going to react. In Vardhman, this exercise is carried out bit differently. Here, characters play their roles (as in a typical role play exercise). The protagonist prepares a list of tasks and people he needs to meet regarding the same. He then actually interacts with them and conversation then ensues. This methodology, in reality, combines the features of in-basket exercise and role - play.

Also, in many ACs computerized in-baskets are carried out that calls for the participant to pick among a set of pre-defined alternative behaviors. But, in Vardhman, participants are given freedom to write or express their responses or actions freely. It leaves a room for creativity.

2. Different style of Group Discussion: Traditionally, in a typical GD a participant supports either point of view (either favour or against) and keep justifying the same while rebutting the other perspective. In Vardhman, there are two rounds of GD. In the first round they are free to chose a perspective in which they believe (either favour or against). Thorough discussion is done. Then in the second round, participants are asked to change their side (deviate from their original perspective) and speak against their former version. This helps in building empathetic attitude, ability to think from both the perspectives and most importantly appreciate and respect others' perspective.

3. Duration of AC: In many organizations ACs run for a half - day to two days. But in Vardhman it is for 6 days. For a comprehensive evaluation, assesses must be observed for a longer duration. More the exercises the participants participate in, better the evaluation.

4. Exercise – Competency ratio: Earlier as many as seven to eight competencies were evaluated from a single exercise but now these have been reduced. Otherwise it would have been difficult for the assessor to distinguish among that many dimensions. Vardhman follows a contemporary approach and exercises are designed to elicit information on only two -three dimensions at a time from a particular exercise, thus making assessor ratings more reliable.

5. Personality projection by the participants themselves : In Vardhman, exercises like *Design your own life*, *The Mask* help in bringing out the self -image as perceived by the participants

themselves. These exercises bring twin benefits. One is that the information obtained can become good inputs for judgment by the assessors. Another benefit is that candidates speak themselves of their positives and negatives, which thereby, on one hand gives them confidence and on the other hand gives them the courage to accept their deficiencies respectively.

6. Competent assessors: Assessors at VTDC are given a great deal of autonomy and support from senior management for carrying out the process. Candidates are observed by either a neutral assessor (professional) from outside Vardhman or coordinators of VTDC (having strong educational credentials and a proven record of prior program development and administration) or may be senior managers who usually come from above the level of the candidates' immediate supervisors and have a broader perspective of the skills and abilities needed than what an immediate supervisor does while nominating people for his own level.

7. Methodology of assigning scores: Rating Scales are used to assess individuals on variety of parameters. Explanation of range of marks on a continuum is provided to the assessors so that all assessors have a common understanding of the degree of scores. Indicators related to each competency are well defined. This ensures uniformity of understanding among assessors. Each assessor prepares a chart showing scores of different participants on various dimensions in each exercise. Then these scores are clubbed to get final scores after assigning weights to different exercises. A descriptive report of each participant is written by the coordinator of the exercise after summing the reports/scores of all exercises reflecting the managerial potential of the candidate. Strengths and improvement areas of each candidate is written and preserved meticulously.

8. Self assessment: Researches have recommended that not only the assessors will assess the participants but allow them also evaluate themselves. The participants assess themselves immediately after each exercise. To mitigate the fear from the minds that written feedback can be used as evidence against them, written feedback is not taken. The fear can stop the participants from giving fair feedback about their own performance in a particular exercise. Therefore, a verbal self - assessment is sought. High scoring partaker shares his knack or strategies that helped him score high. Low scoring partaker shares his deficiencies or areas where he went wrong. Candidates are also asked to share what is their take away or learning from the exercise.

9. Infrastructural arrangements: VTDC is away from the work

place that keeps the participants bit relaxed off duty so that they can fully concentrate on the programme. Residential conditions are amicable. Training rooms have a comfortable layout with latest audio-visual equipments. The premises itself is on the outer skirts of the city which makes the atmosphere free from pollution and other nuisance of *concrete city*. Sprawling lawns are an attraction for the participants to spend their evenings together sharing their experience, getting to know each other and also enjoy nature.

Conclusion

Assessment centers are of paramount importance for any organization which wants to survive for long and that too with a competitive edge. A number of competencies are evaluated from different exercises. Observations of an assessment center can play a highly significant role in developmental and promotional decisions. These can help unlock potential for growth of both the individual himself and of the organization at large. Care must be taken to continuously update it to the contemporary practices and research findings so that maximum benefit can accrue.

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Annexures:

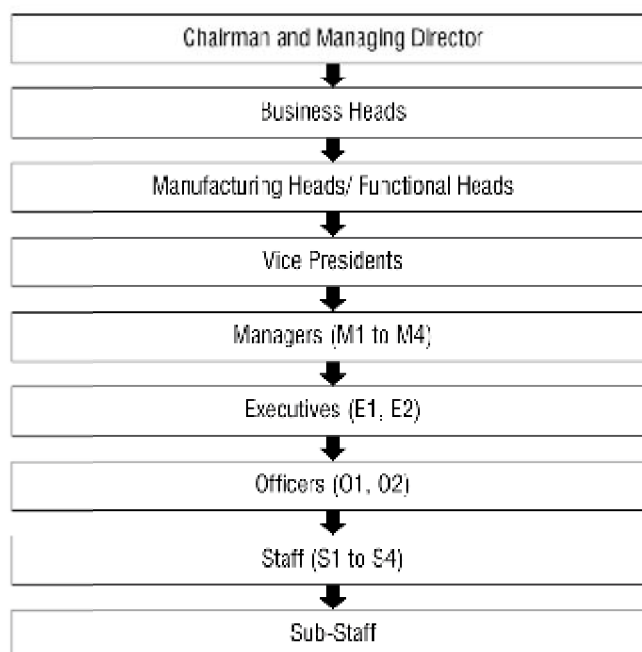
Annexure 1: Financial Overview

Financial Indicators Of Vardhman Group (Rs. In Crores)						
Particulars	Group	Group	Group	Group	Group	Group
	2013-14	2012-13	2011-12	2010-11	2009-10	2008-09
Gross Sales	6657	5507	5252	4492	3391	3186
Fob Value Of Exports	2076	1743	1687	1286	751	688
Profit Before Tax	1034	561	276	755	411	137
Cash Accrual (PBT + Dep.)	1376	860	553	1020	667	380

Gross Block	6044	5139	4754	4415	4175	3935
Net Block	3351	2742	2518	2690	2598	2571
Capital Employed	7674	6796	5975	5753	4747	4555

(Source: www.vardhman.com)

Annexure 2: Organisational Hierarchy Of Vardhman Textiles Limited



(Source: Company's official records)

Multi-stakeholder CSR approach of ITC Limited: Impact on Rural Living & Community Development

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Abstract

Corporate Social Responsibility (CSR) is no more a buzzword for business organizations. Almost all business corporations have taken various CSR initiatives keeping in mind the requirements of various stakeholders near their area of operation. By integrating CSR into core business processes, organizations have achieved the ultimate goal of creating both social value and corporate value. Over the years, ITC Limited, a diversified Indian conglomerate, has contributed immensely towards the development of rural community through its various unique community based model like e-choupal. The CSR program at ITC is a real example of the concept of Strategic CSR, wherein companies determine the activities they have the resources to devote to being socially responsible and can choose that which will substantially benefit the society and strengthen their core competencies. This case analyses how a successful diversified corporation has integrated its various business activities with its various rural development programs like agricultural productivity, women empowerment, primary education, skill development, etc. The case highlights how the business integration with social objectives has benefitted the rural population be it the farmers, livestock owners, poor woman, youth and children alike. The case highlights the role of a corporation to visualize the CSR initiatives in sync with the need of the stakeholders, fund the CSR initiatives, the role of NGOs in implementing the CSR initiatives in the rural areas. The case offers a complete understanding of the CSR model of ITC Limited.

Keywords: Corporate Social Responsibility, Sustainability, ITC, Stakeholder, Social Contract, Corporate Citizenship

"Going forward, competitiveness and profitability will be increasingly linked to the ability of business to make carbon reduction and the creation of sustainable livelihoods an integral part of their value proposition to consumers." - Y. C. Deveshwar, Chairman, ITC Ltd.

The Company: ITC Limited

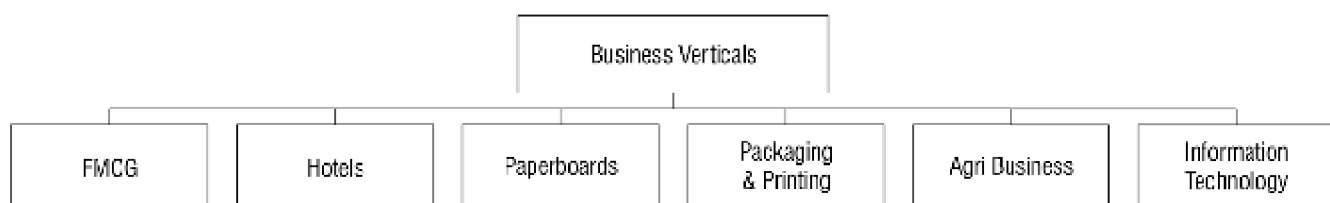
ITC Limited was incorporated on August 24, 1910 under the name Imperial Tobacco Company of India Limited. As the Company's ownership structure changed, the Company was renamed as India Tobacco Company Limited in 1970, I.T.C. Limited in 1974 and then to 'ITC Limited' in 2001.

The company defines its visions statement as "To sustain ITC's position as one of India's most valuable and admired corporations through world class, performance, creating growing value for the Indian economy and the company stakeholders." Further, the company defines its mission statement as "To enhance the wealth generating capability of the enterprise in a globalising environment, delivering superior and sustainable stakeholder value."

Business Verticals of the Company

ITC is a multi-business enterprise with a diversified business portfolio of FMCG, Hotels, Paperboards, Packaging, Agri-Business and Information Technology (Figure 1).

Figure 1: Business Portfolio Of ITC Ltd.



Over the years, ITC has created some of the best brands in different business vertical. Some of the major products of ITC are Aashirvaad, Sunfeast, Bingo!, YiPPeel, B Natural!, Candyman (food products), Classmate, Paperkraft (Stationery products), Essenza Di Wills, Flama Di Wills, Vivel, Engage, Savlon, Shower to Shower (Personal care products), Wills Lifestyle and John Players (Lifestyle products), Mangaldeep (Agarbattis) and Aim (Matches).

Financial Performance

The gross revenue of the company for the year 2015-16 was Rs. 51582.45 crores while net Revenue was Rs. 36475.27 crores. The profit before Tax (PBT) was Rs. 14958.39 crores while net profit was Rs. 9844.71 crores. The earnings per share (EPS) of the company for the year 2015-16 stood at Rs. 12.26. (Refer Exhibit 1: Financial Performance of the company during 1995-96 to 2015-16). The company's equity shares are listed on the National Stock Exchange (NSE), Bombay Stock Exchange (BSE) and Calcutta Stock Exchange. (Refer Exhibit 2: Share Price movement of ITC).

Dividend history of ITC Ltd.

The company has performed consistently well over the years and has also rewarded its shareholders generously by paying uninterrupted dividend over the years (Refer Exhibit 3: Dividend distributed during the last 10 years).

ITC Shareholding Structure as on March 31, 2016

ITC is among the few companies in India which is entirely held by public shareholders. As on March 31, 2016, the Institutional shareholding is 55.62% while non-institutional shareholding is 44.16%. At present, there is no promoter stake holding and hence the company is entirely run by professionals (Refer Exhibit 4: Shareholding Structure as on March 31, 2016).

Governance Structure of the Company

ITC has established the best corporate governance norms and to work in the best interest of all its stakeholders, the company follows leadership at three levels (Figure 2 & Figure 3).

Figure 2: Leadership at three levels

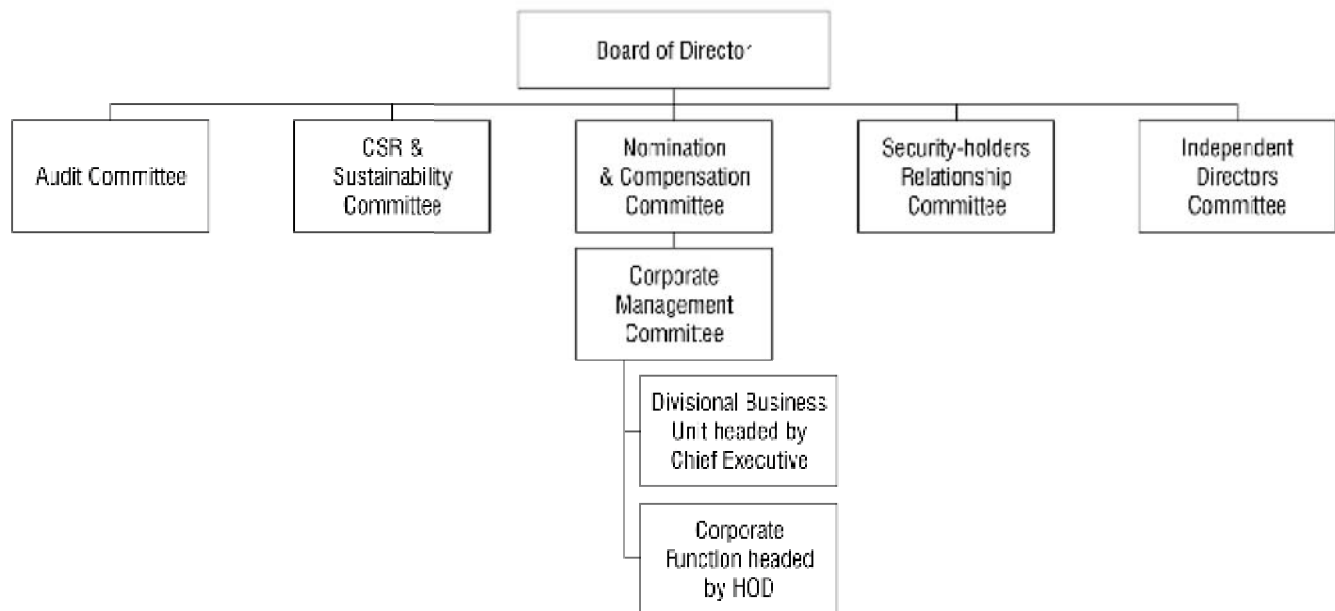


Level 1: The Board at the top carries the responsibility for strategic supervision.

Level 2: Corporate Management Committee which comprises of the Whole Time Directors and Senior Management takes care of the strategic management.

Level 3: Divisional Management Committee of each business division takes care of the executive management.

(Source: Company website)

Figure 3: Organizational hierarchy

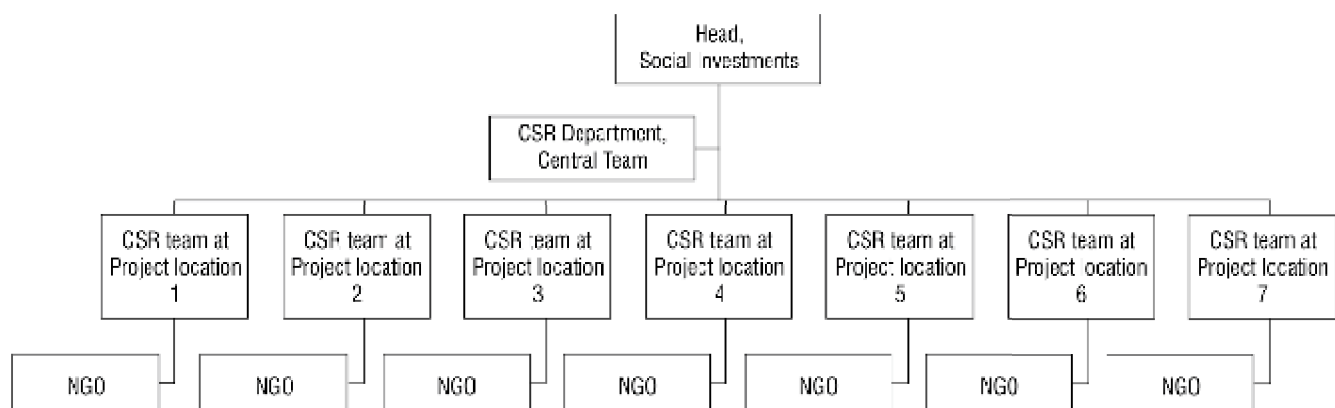
(Source: Company website)

CSR and Sustainability Committee

The board of ITC has constituted a committee of Directors under the nomenclature 'CSR and Sustainability Committee'. The committee reviews, monitors and provides strategic direction to the Company's CSR and sustainability practices. The Committee guides the Company in integrating its social and environmental objectives with its business strategies and assists in crafting unique models to support creation of sustainable livelihoods. The Committee formulates & monitors the CSR Policy and recommends to the Board the annual CSR Plan.

CSR initiatives of ITC

ITC has a separate CSR department which implements the CSR vision of the company. The CSR department is called as 'Social Investments' department. All the CSR interventions of ITC are initiated under the umbrella titled "Mission Sunehra Kal". The CSR department is headed by Executive Vice President and Head, Social Investments. A team of senior CSR professionals are located at Kolkata, the registered office of the company and monitors the entire CSR operations of ITC being undertaken throughout the length and breadth of the country. A team of CSR professionals, located at each of the operational area of ITC implements the CSR policies of the company with the coordination of reputed NGOs, monitors the progress of the CSR implementation, interacts directly with the stakeholders, government agencies and report back to their central team on regular basis.

Figure 4: CSR Team

CSR Policy of the Company: The CSR Policy of ITC gives a strategic direction to all the CSR initiatives of ITC. The policy:

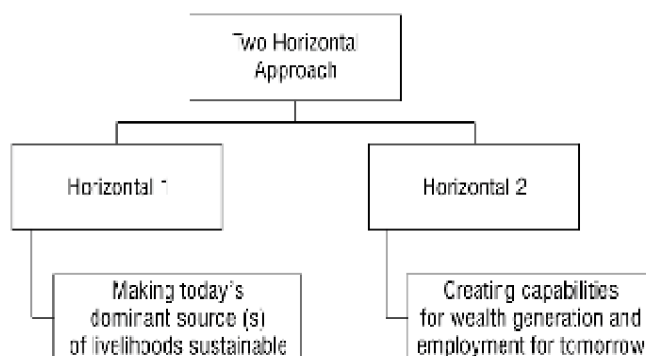
1. Directs ITC's CSR Programmes towards achieving one or more of the following - enhancing environmental and natural capital; supporting rural development; promoting education; providing preventive healthcare, providing sanitation and drinking water; creating livelihoods for people, especially those from disadvantaged sections of society, in rural and urban India; preserving and promoting sports;
2. Develops the required capability and self-reliance of beneficiaries at the grass roots, especially of women, in the belief that these are prerequisites for social and economic development;
3. Engages in affirmative action interventions such as skill building and vocational training, to enhance employability and generate livelihoods for persons from disadvantaged sections of society;
4. Pursues CSR Programmes primarily in areas that fall within the economic vicinity of the Company's operations to enable close supervision and ensure maximum development impact;

The key stakeholders identified by the company in line with the CSR Policy are :

1. Rural communities with whom ITC's Agri Businesses have forged long and enduring partnerships through crop development and procurement activities.
2. Communities residing in close proximity to ITC's production units.

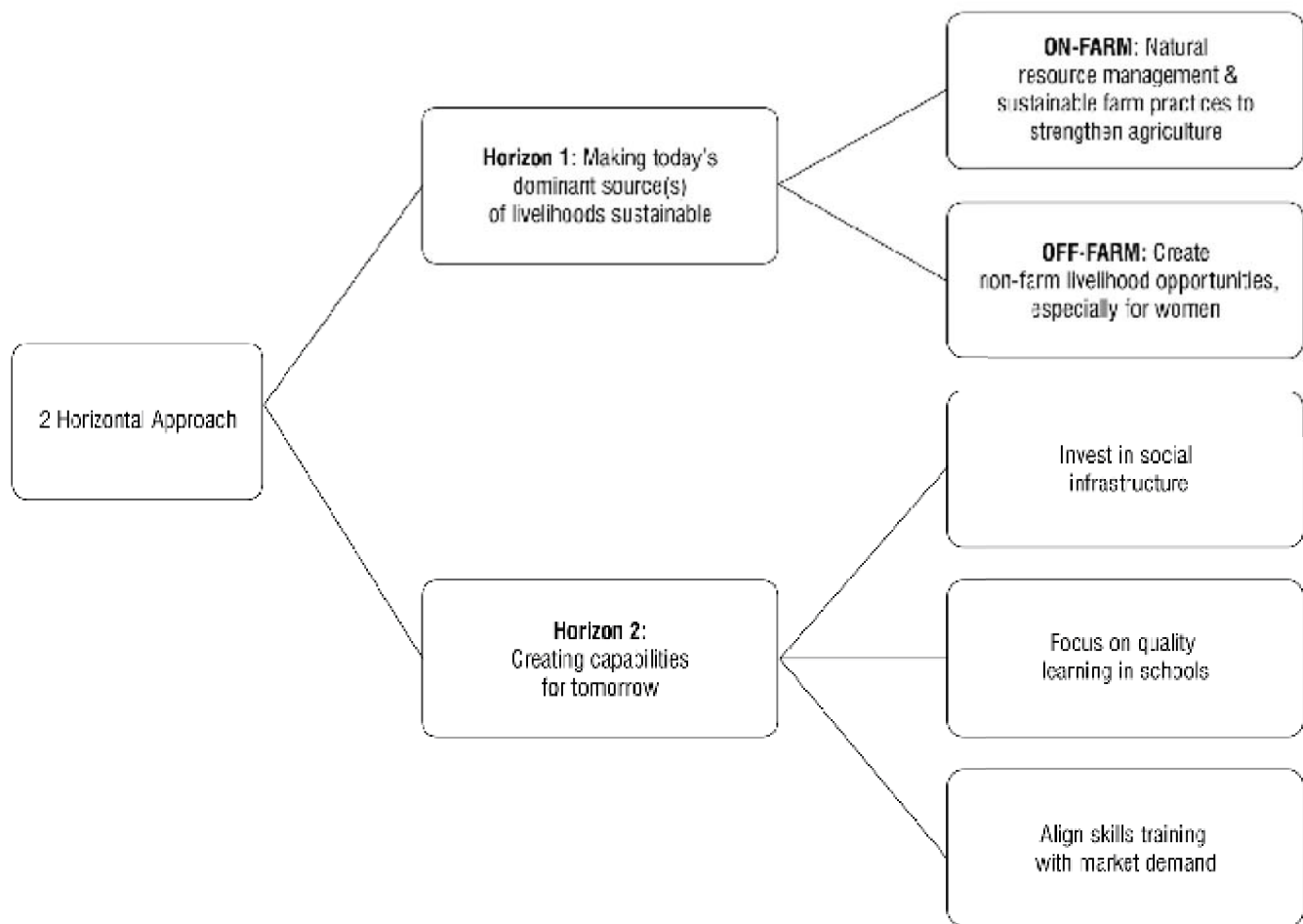
Two Horizons Approach: The Company has adopted a two horizons approach to secure the sustainable livelihoods of today and tomorrow for all its stakeholders.

Figure 5: Two Horizontal Approach at ITC



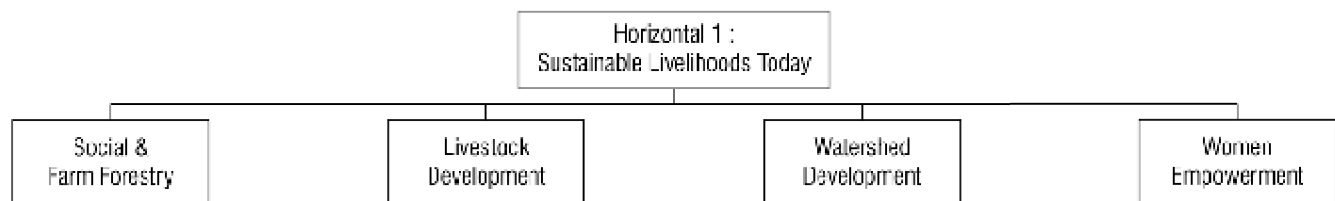
(Source: Company website)

The 2 Horizons approach calls for an integrated approach to development, comprising numerous strata of CSR interventions, which is depicted in Figure 5 and 6.

Figure 6: Two Horizontal Approach at ITC

(Source: Company website)

Horizon 1: Sustainable Livelihoods Today: The objective of Horizon 1 is to enable the poor to manage and reduce risks in their current portfolio of economic activities. The intervention under Horizon-1 are through Social & Farm Forestry, Livestock Development, Watershed Development and Women Empowerment.

Figure 7

Social Forestry

The programme is aimed at providing food, fuel and fodder security through plantations by enabling financial, technical and marketing support to farmers. To date, the Farm and Social Forestry Programmes have greened nearly 225,293 hectares of area that generated over 101 million person-days of employment. The area under Agro Forestry that facilitates cultivation of trees along with crops on continuous basis has been given a major emphasis in recent years, evident from the rapid increase in area shown in the chart. Over the years, the scope and the benefit of the program has increased substantially. The coverage of the programme is as shown in Table 1.

Table 1: Coverage of the CSR programmes

Activity	2014 -15	2015 -16	Cumulative to 2015-16
Coverage			
No. of new villages	1,284	813	4,533
No. of new beneficiaries	17,397	15,634	85,701
Plantation Area			
Pulpwood (Hectares)	10,109	10,031	64,795
Energy (Hectares)	10,246	10,056	22,879
Saplings Planted (Lakhs)	1,078	785	4,800
Agro Forestry Area (Hectares)	9,241	10,655	24,566

Source : ITC Annual Report, 2015-16

Watershed Development

ITC supports water resource conservation, plantations, soil & moisture conservation etc. There is a higher level of emphasis on water conservation and water utilization. The programme encourages and supports water utilization facilities such as sprinkler systems, pipe lines, etc. The investments on water use related infrastructure (pipelines, wells, sprinklers, etc) are making considerable difference in terms of impact indicators such as yield, area under agriculture, income and living standard of the rural population. The Programme facilitates community-based participation in planning and executing watershed projects. The coverage of the Watershed Development programme is as shown in Table 2.

Table 2: coverage of the Watershed Development programme

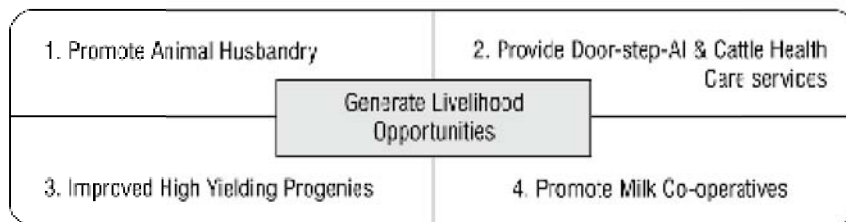
Activity	2014 -15	2015 -16	Cumulative to 2015-16
Water-harvesting			
Minor Structures (No.)	1,159	1,186	5,321
Major Structures (No.)	331	348	2,677
Total Structures	1,490	1,534	7,998
Watershed Area			
Area Treated (Hectares)	32,644	41,694	1,72,663
Critical Irrigation Area (Hectares)	18,753	17,169	86,337
Total Watershed Area	51,397	58,864	2,59,050
Water Storage Capacity (Million CuM)	3.22	3.57	27.34
Direct Beneficiaries (No.)	32,960	44,287	2,05,418
Employment man-days (Lakhs)	7.15	4.76	52.09

(Source : ITC Annual Report, 2015-16)

Livestock Development

ITC has been implementing a comprehensive Livestock Development Programme as part of the company's CSR initiatives towards

inclusive and sustainable growth.



The main objective of the programme is to diversify the income portfolio of rural households by improving the livestock-based incomes of cattle owners through better Cattle Breeding Services. It executes this programme through a comprehensive package of services covering doorstep Artificial Insemination (AI) and all other aspects of cattle health through Cattle Development Centres (CDCs) run by local youth trained as technicians. The coverage of the Animal Husbandry programme is as in follows:

Table 3: Coverage of the Animal Husbandry programme

Activity	2014 -15	2015 -16	Cumulative to 2015-16
CDC Centres (Functional No.)	256	238	238
Breed Improvement			
No. of Animals (Lakhs)	2.24	2.29	17.91
No. of pregnancies (Lakhs)	1.04	1.21	8.48
No. of calving (Lakhs)	0.80	0.92	5.70
Vaccination & Health (Lakhs)	0.43	0.84	6.31

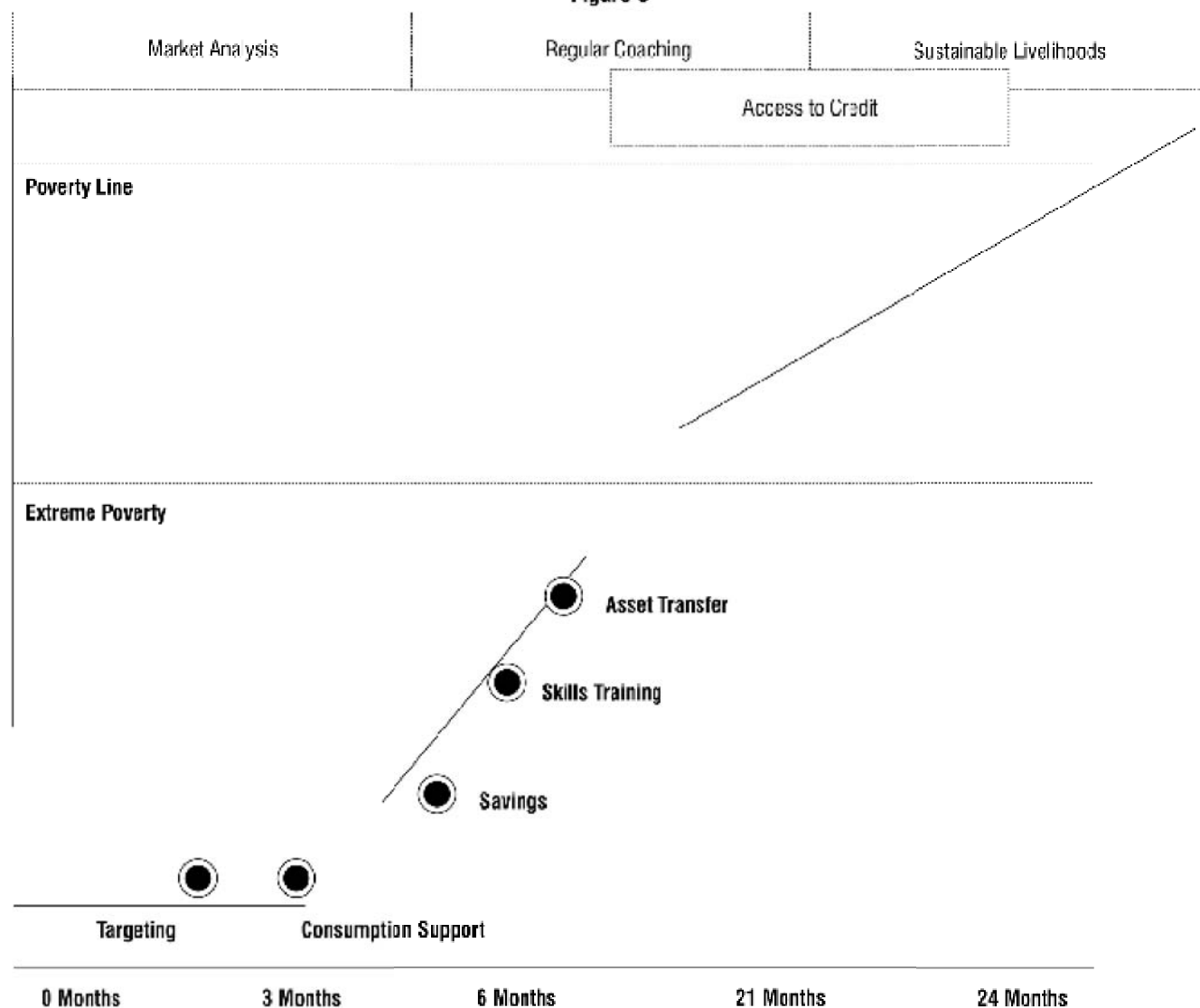
(Source : ITC Annual Report, 2015-16)

Women's Economic Empowerment

This initiative specifically targets poor women to provide them a range of gainful employment opportunities supported with financial assistance by way of loans and grants. The company has linked the programme with the market to create long term sustainability of their micro-enterprise.

Targeting the Hard Core Poor Woman (THP) program is an innovative initiative by ITC-Bandhan to provide economic support and sustained empowerment to destitute families to fight their way into the league of successful individuals and self-reliant families. THP programme aims to bring inspirational change in the lives of rural women who are extremely poor by helping them build sustainable sources of income. After training the poor woman for 24 month, appropriate assets are transferred to the beneficiaries. The assets range from farm assets, non-farm assets, livestock, or mixed assets. While under farming goat rearing, pig rearing, animal husbandry and poultry are offered, the non-farming occupations include grocery, tailoring, beauty products, salons, chakki, garments and shoes. This model is called as Graduation Model, wherein the hard core poor woman graduate after 24 months and runs a sustainable microenterprise.

Figure 8



The Graduation Model

The brief details of the number of the beneficiaries of this program during the year is as shown in Table 4.

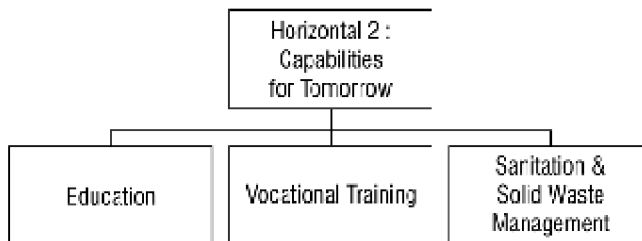
Table 4: Number of the beneficiaries of this program

Beneficiaries	2015-16
Women Selected	10,200
Women Trained	10,200
Women Provided Assets	10,200
Enterprise (Asset distribution)	
Or-Farm Assets	4,799
Off-Farm Assets	4,199

Mixed	1,202
Social Security	
Women having Savings Account	6,281
Women able to write names and numbers	6,712
Women with access to formal health services	3,532

(Source : ITC Annual Report, 2015-16)

Horizon 2: Creating Capabilities for Tomorrow: The objective of the horizon 2 is to improve habitats, reduce morbidity, ensure a healthy community and invest in education to enable young people to develop skills for gainful employment. The intervention under Horizon 2 are through Primary Education, Vocational Training and Sanitation & Solid Waste Management



Primary Education

ITC's Education Programme aims to provide weaker sections of society access to education with focus on learning outcomes and retention. The primary program for children in grades 3 to 5, focusses on improving their literacy and numeracy skills. The aim

of the program is to accelerate and sustain basic learning for children in these grades who are, as yet, not even at grade 2 level. Without being able to read and recognize numbers, these children are unable to cope with the traditional school curriculum leading to poor learning outcomes each year. The number of students which are enrolled for the programme during the last two years are:

Table 5: Number of students which are enrolled for the programme during the years 2014-16

Activity	2014 -15	2015 -16	Cumulative
Education			
Children covered in Read India Plus Programme (Lakh)	0.54	0.46	NA

(Source : ITC Annual Report, 2015-16)

Vocational Training

ITC's Vocational Training Programme focuses on building market relevant skills so as to make potential job seekers industry ready and employable. Skill training is provided in different trades such as hospitality, tailoring, beautician, automotive, electrical, construction, computer skills, security skills, bedside nursing and retail. The Trade-wise Coverage in Skilling is as shown in Table 6.

Table 6: Trade-wise Coverage in Skilling

Enrolment	Till 2013-14	2014-15	2015-16	Cumulative to date
All Trades	6,315	13,180	11,872	31,367
Hospitality	1,489	3,252	3,361	8,102
Electrical	341	1,915	1,960	4,216
Soft Skills – Retail / Marketing / Spoken English/Technician Course	968	1,484	1,748	4,200
Tailoring & Beautician	776	2,357	741	3,874
Computer Skills	757	1,765	351	2,873
Automobile	337	1,144	1,238	2,719
Garment Manufacturing/Industrial Sewing Machine Operations (ISMO)	662	254	565	1,481
Bedside Nursing	-	654	1,219	1,873
Driving	838	-	-	838
Security	66	28	-	94

Printing and Packing	-	316	110	426
ITeS/Data entry operator	-	-	230	230
Material Handling	-	-	150	150
Fitter and welding	-	-	101	101
Construction	81	11	-	92
BPO	-	-	55	55
Others	-	-	43	43

(Source : ITC Annual Report, 2015-16)

Sanitation

In order to promote overall health and reduce incidence of water-borne diseases through prevention of open defecation, ITC has promoted low cost toilets on a cost sharing basis, coupled with high impact awareness campaigns directed at the community to bring higher levels of ownership and behavioural change at the grassroots level.

Solid Waste Management

ITC's Waste Recycling programme, 'WOW – Well Being Out of Waste', inculcates the habit of source segregation and recycling among school children, housewives and general public as well as industries and business enterprises. The aim is to promote a clean and green environment and provide a sustainable source of livelihood for rag pickers and waste collectors. The coverage of the solid waste management intervention are as shown in Table 7.

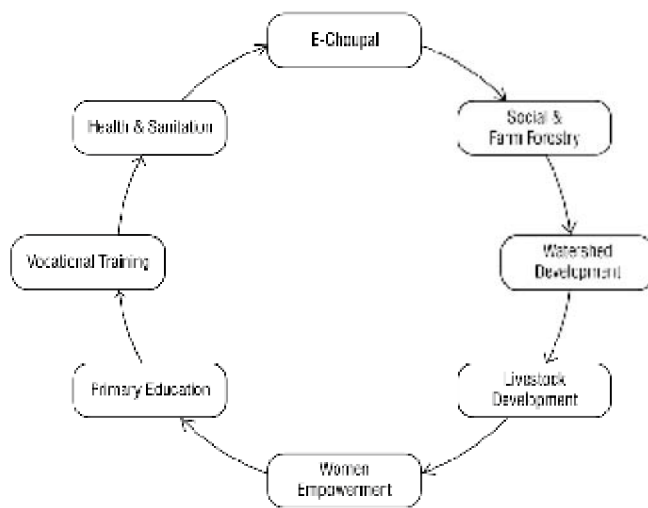
Table 7: Coverage of the solid waste management intervention

Particulars	2011-12	2012-13	2013-14	2014-15	2015-16
Households Covered	8,189	9,365	9,702	27,164	42,159
Total Waste Collected (MT)	1,076	1,493	2,201	2,717	3,975
Waste Composted (MT)	569	843	1,516	1,914	2,656
Waste Sold as Recyclable (MT)	332	371	380	385	397
Waste going as Municipal Dump (%)	16%	19%	14%	15%	23%
Revenue (Rs. lakhs)	38.33	43.91	53.29	67.07	66.77

(Source : ITC Annual Report, 2015-16)

Overall, the CSR intervention of ITC covers multi-stakeholders especially based in the rural areas and includes children, youth, farmers, livestock owners and poor women (Figure 9). The program makes an effort to impact the rural living and community development.

Figure 9: CSR intervention of ITC covers multi-stakeholders



(Source: Company website)

Implementation: ITC's CSR projects are implemented through various reputed NGOs / Trusts. Currently ITC works with BAIF Development Research Foundation in the area of Livestock development, Pratham Education Foundation in the area of education and skill development, Bandhan for sustainable livelihood program for hard core poor woman, Vibhavari for watershed development, etc. Some of the CSR initiatives of ITC is being implemented through ITC Education Trust, ITC Rural Development Trust, ITC Sangeet Research Academy, ITC Bhadrachalam Education Trust, Tribeni Tissues Education Society, etc. The selection of the NGOs are based on their expertise in the respective CSR intervention.

Total CSR spending during the last five (5) financial years

Over the years, ITC has increased its spending towards CSR. During the last two financial years, it has spent more than 2% of its average net profit for three immediately preceding financial years. The CSR spending during the last five years are as shown in Table 8.

Table 8: CSR spending during the last five years

	(Amount In Rs. Crores)				
Particulars	2011-12	2012-13	2013-14	2014-15	2015-16
CSR spending	58.00	78.00	107.00	214.06	247.50
Average Net Profits for 3 immediately preceding FYs	6003	7320	8347	10,646.11	12338.22

CSR spends as a % of Average Net Profits for 3 immediately preceding FYs	0.95%	1.06%	1.20%	2.01%	2.00%
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(Source: Annual Report of the company)

Way Forward to maximize the impact?

At present, the CSR program of ITC is spread across 82 districts in 19 states in India. It covers more than 112 projects ranging from watershed development to primary education. The CSR program of ITC impacts the farmers through watershed development by increasing the agricultural yields, livestock owners through livestock development by increasing the milk yield, hard core poor woman through sustainable livelihood program by transferring either farm based or no-farm based asset, children through Read India Plus programme by enhancing the learning outcomes and retention, youth through skill development by providing training in the area of automobile, hospitality, nursing etc. The spending on CSR has also increased over the years from Rs. 58 crores (2011-12) to Rs. 247.50 crore (2015-16), which is a substantial increment.

Now, the moot question before the company is whether all the resources utilized towards CSR has a substantial impact on the multi-stakeholders in enhancing their living standard or whether the company should restructure its CSR model.

Exhibit 1: Financial Performance of the company during 1995-96 to 2015-16²⁵

Particulars	1995-96 (Rs. In Cr.)	2015-16 (Rs. In Cr.)
Gross Revenue	5115	53748
Net Revenue	2536	33641
PBT	452	14958
PAT	261	9845
Capital Employed	1886	32929
Market Capitalization	5571	2,63,989*

*As on 31st March, 2016

Exhibit 2: Share Price movement of ITC²⁵



Exhibit 3: Dividend distributed during the last 10 years²⁷

Financial Year	Dividend Per Share (Rs.)	Dividend (Rs. in Crores)
2015-16	8.50	6840.12
2014-15	6.25	5009.70
2013-14	6.00	4771.91
2012-13	5.25	4148.46
2011-12	4.50	3518.29
2010-11	4.45	3443.48
2009-10	10.00	3818.18
2008-09	3.70	1396.53
2007-08	3.50	1319.02
2006-07	3.10	1166.29

²⁵Annual Report, 2015-16

²⁷Annual Report, 2015-16

Exhibit 4: Shareholding structure as on March 31, 2016²⁸

Category of Shareholder	% Stake-holding
Promoter	0.00
Public	
Institutional	55.62
Non-Institutional	44.16
Total Public Shareholding	99.78
Shares underlying Global Depository Receipt	0.22
Total	100.00

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1. Annual Report of ITC Limited (2011-12, to 2015-15)
2. Sustainability Report of Infosys Limited (2015-16)
3. <http://www.itcportal.com/>
4. <http://www.itcportal.com/sustainability/index.aspx#csr>, accessed on October 01, 2016

²⁸Shareholding Pattern as on March 31, 2016

Information Technology and Sustainable Development: A Review

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Abstract

Human life has direct relationship and dependence upon the natural environment they live in. Industrial development, which most will agree to the greater extent, contribute towards degrading and worsening of natural environment. Sustainable development (SD) has emerged in new milieu as the major challenge for international development to the alarming call of natural, social, and economic environment. These global environmental problems have arisen from industrial development patterns, resource degradation and depletion, widening economic gaps between and within industrial and developing countries, and resource-driven conflicts. The purpose of this paper is to make reader acquaint about the recent trends in sustainable development and examine the role of information and communication technology in shaping sustainable development. As ICT has a prominent footprint in resource consumption, greenhouse gas (GHG) emissions, solid waste management, environment impact assessment, water quality deterioration. Hitherto, proper implementation of ICT in mitigating the environment threats (GHG emissions and resource consumption), environment impact assessment, resource mobilization and strategies towards curtailment of global climate changes.

Keywords

Information and Communication Technology, Sustainable Development, Industrial Development, Natural Environment

Introduction

The last few decades have undergone a radical shift in the movement of harnessing and mobilizing science and technology in the quest for a transition towards promoting sustainable development. Efforts are being made in this perspective to promote and enhance movements towards sustainability ranging from developing technology for harnessing solar energy, to internationalization of agricultural research, to application of Information and Communication Technology (ICT) to the burning issues of global warming and ozone depletion [Cash et al., 2003;

Clark and Dickson, 2003]. In this backdrop, technological innovations plays a crucial role in transforming societies and economies by enhancing efficiency, effectiveness, connectivity and access to resources and services. The challenge ahead is how to utilize technologies in a way to achieve the goals of sustainable development without impairing the human and natural capitals [Seyfang, 2006]. To address issues of poverty along with insecurities of water, energy and food in developing countries, there is an immediate need of tethering technology to contribute towards sustainability, prosperity and dignity. As a result, society lacks a critical understanding regarding which kinds of programs, institutional arrangements, and more generally, "knowledge systems" can most effectively connect science and technology for sustainability.

The term sustainable development has been defined by World Commission on Environment and Sustainable Development in 1987 as "development that meets the needs of the present without compromising the ability of future generations to meet their needs". It is most widely accepted definition of sustainable development by most people. But there are few apprehensions regarding this definition e.g. development has many dimensions and needs of present and future generations are continuously changing and subject to different meanings. In this context the discussion on sustainable development encompasses a wide variety of campaigns with disparate reform agendas and a continuum of different paradigms integrated in sustainable development as shown in Figure 1.

Figure 1: Paradigms integrated in sustainable development



(Source: IUCN Report, 2006)

The model as shown in Figure 1 has a conceptual simplicity and by encouraging the classification of sustainable development impacts into three convenient categories (community, environment and economy), it makes analysis more straight forward. Often sustainable development is presented as aiming to bring the three together in a balanced way, reconciling conflicts [Giddings et al., 2002].

Technological innovations are considered as one of the major instrument and mechanism to diminish the negative impacts of various activities causing harm to the environment [Hall and Vredenburg, 2003; Kern, 2008; Patris et al., 2002; United Nations, 1992]. The sustainability is not only related to the technological innovations but also incorporates the areas of legislation, educational reforms, incentive stimulus etc. Educational component is crucial as the well-educated communities can properly handle and use technology and can get maximum benefits from it. On the other hand inappropriate utilization of technology can result in unexpected risks and a potential deterioration of climate change [UNU-IAS, 2008]. Sustainable development is widely seen as a challenge that must be met through the two broad domains of ICTs and the Internet, which seems as an emerging opportunity to bypass contemporary development constraints. Therefore, development in this pursuit is not a matter merely for developing countries only. It is much broader, incorporating all spheres of life ranging from the family, through local communities, regions and nations, to the planet as a whole. Sustainability needs to be a priority in all countries, developed and developing as well as under-developed countries, and in the international system that links them. The World Summit on Information Society and UN ICT Task Force, have emphasized the role of ICTs in achieving minimum development goals (MDGs). The United Nations have defined ICTs as the "tools that facilitate communication, processing and transmission of information and the sharing of knowledge by electronic means." The government of every nation is continuously trying to transform its country into a learning economy and knowledge society [Raghupathi et al., 2014]. This has been permeated to the corporate mission and vision. The best example is that of Dow Jones Sustainability Index which measures the performance of the company in terms of strategic quality management and ability to manage risks derived from economic, social and environmental developments [Robecosam, 2014]. Earlier studies have examined and confirmed the positive effect of ICT on productivity and growth [Brynjolfsson et al., 2002; Brynjolfsson and Hitt, 2003].

Although, there is a plethora of literature available about ICTs and development in general, however, very scant literature is available regarding its strategic importance for sustainable development, its role in knowledge mobilization and governance, which determines the favourable influence of ICTs on sustainability [Jickinen, 1998]. The study was undertaken to determine the role of Information and Communication Technology (ICT) in shaping the sustainable development and also tries to link sustainable development and technological innovations.

Methodology

The review methodology was used for this study; review of the papers related to sustainable development and technological innovations was performed. It was revealed from literature that ICT has an important role in the sustainable development and technological innovation. The papers were accessed from the e-resources databases like Emerald Insights, Taylor and Francis, Science direct-Elsevier, Springer Link etc.

Theoretical Development

The importance of ICT for sustainable development has been highlighted by many researchers as well as developmental organizations with reference to specified boundaries and geographical remoteness [Al-Jaghoub and Westrup, 2003; Beckett and Jonker, 2002; Baddi and Sharif, 2003; Mansell, 2002]. ICT resources have been classified by Attama and Owolabi (2008) as, Computers, Internet, Electronic Mail and World Wide Web. The computers include CDROM, flash drive, diskettes etc. which help in increasing their speed and accuracy. Internet is considered as the network of computers that communicates with each other through a proper networking device [Ogbomo, 2004]. The internet connectivity has transformed our access of knowledge, its dissemination and propagation across diverse domains. Web and other social media have played an important role in mobilizing people for a collaborative effort to self-organize and contribute their knowledge on shared documents like Wikipedia, Academia, Research-gate etc. thereby engaging in social activism [Shirky, 2008; Bull, 2015]. Twitter and Facebook have been credited with everything from Obama's 2008 election victory [Zhang et al., 2009] to the Arab Spring [Ghoni, 2012]. E-mail is provided for sending and receiving mails through e-devices and website helps in locating the information about products, social agendas, and business transactions [Chivetalu, 2003]. ICTs have a considerable contribution in the improvement of production and eco-efficiency through dematerialization of consumption and production processes [Hilty, 2010]. This idea leads to the vision

of an ICT-enabled 'weight-less economy' or 'sustainable information society', as suggested by Coyle (2007), Isenmann (2008) and Schauer (2003).

Wolters and Boer (2002) reported that "the growth in the economy is subjected to its readiness for international competitiveness, which in turn, is a matter of embracing the knowledge-based economy. Therefore, if the economic growth is to be sustained, then the increasing adoption of ICTs has to be conducive to sustainability." [Mohamed et al., 2010, p. 745]. ICT has been regarded crucial for developing and modernizing educational system, platform for effective communication, health sector improvement and one of the valuable tools for economic growth [Punie et al., 2006; Ngoma, 2010]. The application of ICTs in the production sector creates 'intangible assets' which helps in improving the overall efficiency of all sectors of production [Ngoma, 2010]. ICTs investments are a capital input which adds up to overall capital expansion, thus serving to increase labour productivity [Souter, 2004]. The Organization for Economic Co-Operation and Development (OECD) views ICT as a powerful vehicle for enhancing efficiency that provide access to new markets or services, create new opportunities for income generation, improve information and knowledge management inside the firm and reduces transaction costs and increase the speed and reliability of transactions for both business to business and business to consumer transactions [OECD, 2004].

Schreyer (2000) is of the opinion that different employees working in an organization are paying particular attention to the relationship between ICTs and economic development. However, other school of thought opines that technology has been considered as a tool for lower order communication and coordination and is inclined to be abused than exploited for the purpose of knowledge management within an organization [Robertson and Hammersley, 2000]. In this backdrop, the over-reliance on ICTs particularly from the knowledge management perspective can prove inconvenient as knowledge management is mostly people-centric [Wiig, 1999; Pfeffer and Sutton, 2000; Reneker and Buntzen, 2000; Hedelin and Allwood, 2002]. In light of the above discussion it has been claimed that knowledge management could be successful without ICT tools and should be brought in use only when it is necessary [McDermott and O'Dell, 2001]. Others argued that ICT is strategically important for global reach when organizations are geographically distributed [Duffy, 2000].

ICT has been considered as an important innovation for the development of smart cities. Some of the important applications

of ICT for the development of smart cities include GPS technologies to enhance transportation and traffic flow; database technologies for healthcare management; energy efficiency with low-level of carbon emission; CCTV camera and other software to improve security systems; and mobile connectivity for service co-creation or social networking activities [Bu'u, 2013]. ICT has an important role in the development of smart initiative in smart cities, but also has got relationship with the challenges of sustainable development in urban environment for all citizens [Lombardi et al., 2012; Meijer and Rodriguez-Bolívar, 2015], who are looking for large scale participation in this concern [Vanolo, 2014; Luque-Ayala and Marvin, 2015]. ICT and sustainability has been widely discoursed by international agencies, researchers and other associations and its application for achieving the goals of sustainability [Lombardi and Vanolo, 2015] has provoked academicians to focus on specific dimensions (economic, social, environmental and institutional) in the deployment of smart projects.

Discussions

Technology and Sustainable Development

Technology in a wider perspective comprehends three major domains: tools and techniques to improve human ability to reshape natural phenomena's and address various environmental problems (hammer and nail approach), developing knowledge management system to create things or ways to solve problems (brew beer or to make an atomic bomb approach), and developing technological culture (understanding of the world and value systems). With the emergence of human civilization on this planet, man has been continuously involved in the development of tools for hunting, cultivation, irrigation and drainage, navigation and transportation. Knowledge and technology becomes reflexive in the understanding of ways and means to use technological instruments and tools, such knowledge becomes encrypted and communicable as technological know-how. The second domain of technology gives rise to the development of modern scientific knowledge, which is based on experiments and observations, premises and generalizations on the natural phenomena's, theories and laws regarding the behaviour of biotic and abiotic environment.

Sustainable development is understood as the amount of economic output generated by inputs which are obtained from the natural resources. The efficient utilization of scarce natural resources is achieved through appropriate patterns of consumption and production and the efficient utilization of natural resources obtained from the environment. This has given rise to

the concept of "Green Economy" which is deep rooted in sustainable development. Green economy is "a system of economic activities related to the production, distribution and consumption of goods and services that result in improved human well-being over the long period, while not exposing future generations to significant environmental risks or ecological scarcities" and "significantly reducing environmental risks and ecological scarcities" by being "low carbon, resource efficient, and socially inclusive" [UNEP, 2007].

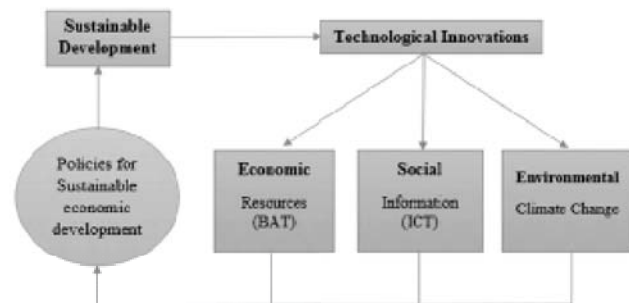
In pursuit of the above discussion regarding various domains of technology and their role in reshaping the development, technology has a positive effect on sustainability by reducing the wastes generated in our day to day life thereby increasing efficiency and utilizing the scarce resources economically. Environmental benefits are not only achieved through technological innovations but appropriateness of scale, use of local resources and equity is important consideration as well. Figure 2 demonstrates a theoretical framework on the relationship between the three domains of sustainable development (social, economic, and ecological) and policies and technological innovation. Best Available Technologies (BAT) and the support provided by ICT contributes towards the enhancement of water use and energy efficiency and also helps in enabling social change through social media, e-learning and e-government models. Technologies have a crucial role to address climate change and are important ingredients of sustainable development like carbon capture and storage. The framework is also supported by an enabling environment with sound institutional and human capital.

ICT and Sustainable Development

ICT is built across 4C dimensions- computing, communications, content and human capacity. The World Summit recently has given emphasis to the 3C's i.e. communication, content and capacity building but less attention has been given to computation part of ICT. ICT requires computers and innovations in hardware and software for applications such as sensors, control systems and other functions for achieving the goals of sustainable development. It not only involves internet connectivity but also involves integration of all forms of ICT and media like mobile telephony, TV, radio, sensors and controllers. Right content and information to the end-users becomes relevant to the sustainable development, when barriers of language, information complexity, incompatibility or missing structure are overcome. Capacity building is essential component of ICT for achieving the goal of sustainability. It involves development of

appropriate regulations, legal frameworks and supply-chains.

Figure 2: Framework of relationship between technology and sustainable development



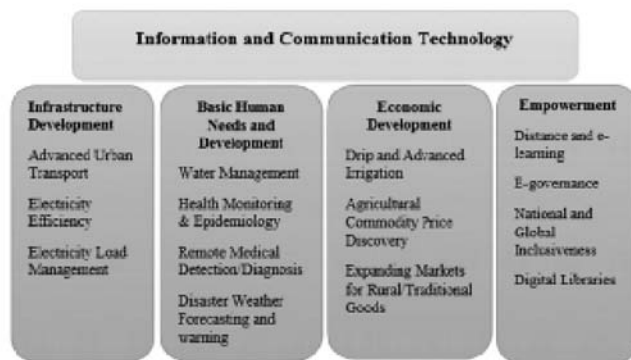
(Source: Constantinescu and Frone, 2014).

ICT has a significant role to play in the development if applied properly and can become part of the solution rather being part of problem. It helps in mitigation and revival of economy and addresses future problems, ICT for infrastructure development, ICT for basic human needs and development, ICT for economic development and ICT for empowerment as shown in Figure 3. Further, ICT systems have three obvious impacts: resource consumption, energy consumption and waste management. Berkhout and Hertin, (2001) founded the impact and various opportunities created by the physical existence of ICTs and the processes involved. As the global energy budget is increasing exponentially, ICT can help in monitoring and evaluating energy production, distribution, and consumption which then leads to a reduction in greenhouse gas emissions. ICT is also involved in environmental protection purposes e.g., electronic monitoring of toxic emissions, remote sensing, electronic controls, and generally improved "transparency" about the use of environmental services [Erdmann, 2004; Esty, 2004]. Global Environment and Sustainability Index (2008) has estimated that ICT-enabled energy efficiency can incur \$950 billion savings in cost through the applications such as smart motor systems, smart logistics, smart buildings and smart power grids. The SMART 2020 report has proclaimed, better building design, management and automation could save 15 percent of North America's building emissions" (2008, p.9). In addition to that ICT can enable potential savings by replacing high-carbon physical goods and actions (e.g., books, meetings) with virtual low carbon equals (e.g., e-books, e-business, e-government and video-conferencing). ICT can also improve the environmental sustainability that can regulate energy management in housing and business facilities [Erdmann, 2004].

ICTs, with the help of smart sensors and meters can cut-off

energy pollutants and water consumption [Souter, 2012]. It optimizes energy supply and demand which results in favourable effect on other sectors such as transportation and logistics. ICTs have also significantly contributed to labour productivity-efficiencies through intelligent production processes, intelligent design and operation of products, reorganization of supply chains (e-commerce), intelligent logistics and distribution, the process of e-introduction, and networking effects. As depicted in Figure 3, ICT has prominent role in improving the urban transport and helps in efficient management of electricity by maintaining the proper record of the consumption and load capacity. ICT plays an important role in the healthcare and medical diagnosis via. ECG, EEG, MRI, CT scan etc.

Figure 3: Generalized ICT Model



(Source: Tongia *et al.*, 2005)

ICT also helps in the weather forecasting and water management. It supports in the agricultural irrigation and promotion of agricultural products by developing the new markets and efficient channels for delivery. In this modern era ICT has an important role in the education and administrative sectors also. It supports in the development and management of e-libraries and e-learning modules. ICT is regarded as the major component of e-governance process as most of the administrative tasks are performed with the help of ICT. The combined effects of large number of people using ICT for medium to long-term periods, besides; they are not well understood because the conditions that create them are complex and intangible [Romm *et al.*, 1999; Erdmann *et al.*, 2004; Casal *et al.*, 2005]. Such conditions might comprise of changes in the nature of work, working relationships and the relationships between migrations and home communities with regard to patterns of consumption and human settlement. ICTs can have substitution effects, e.g., for physical travel, saving on travel, road congestion, knock-on effects in road construction, etc. [Souter, 2012].

Conclusion

Technology has a crucial role in transforming societies and economies by enhancing efficiency, effectiveness, connectivity and access to resources and services. Technological innovations interfere in all the three domains of sustainable development i.e. environment, economy and community. It assists in reshaping the pattern of consumption and production of resources by utilizing best available technology. Technological innovations with the support of ICT contributes towards the enhancement of water use and energy efficiency and also helps in enabling social change through social media, e-learning and e-government models. Technologies have a crucial role to address climate change and are important ingredients of sustainable development like carbon capture and storage. ICT has a major contribution towards the four areas of development-Infrastructure Development, Basic Human Needs and Development, Economic Development and Empowerment. It contributes to the infrastructure development advanced urban transport, electricity efficiency and electricity load management. In the area of basic human needs and development, ICT assists in water management, health monitoring and epidemiology, remote medical detection and diagnosis, disaster management and weather forecasting. Towards economic development ICT has important role to play in drip and advanced irrigation, agricultural commodity, price discovery and expanding markets for rural/traditional goods. ICT also empowers society through distance and e-learning, e-governance, national and global inclusiveness and digital libraries. However, poor countries face greater challenges in efficient utilization of natural resources. In fact, poorly employed sustainable practices hamper the economic development. Therefore, the challenge of proper management and utilization of resources can be dealt by bringing in innovation and creativity in implementation of ICT.

Future Research

The future research direction of the study could be in the nature of some empirical and longitudinal study which may focus on the role of ICT in sustainable development. Future studies can also be taken specifically at some regional or cross-counter level by bringing in the best practices of ICT for sustainable development. More variables need to be taken into consideration in the future researches like social, political, economic, cultural, which influence sustainability system. There is need of an action research for the development of more reliable models for ICT and sustainable development in newly emerging economies; otherwise the digital divide will widen more with regards to

application of ICT in SD in developing countries.

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