

3.3.2 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five year

Sl. No.	Name of the teacher	Title of the book/chapters published	Calendar Year of publication	ISBN number of the proceeding	Affiliating Institute at the time of publication	Name of the publisher
1	Dr.N.Hemalatha	Contemporary Trends In Business And Management/Innovation HRM Practices to Enhance Organizational Performance	2020	ISBN 978-93-87418-07-3	Aurora's PG College(MBA) - Uppal, Hyderabad	Vrinda Publishing House
2	Dr.M.V. Narsimha Rao	Contemporary Trends In Business And Management/Impact of Digitization on Indian Economy	2020	ISBN 978-93-87418-07-3	Aurora's PG College(MBA) - Uppal, Hyderabad	Vrinda Publishing House
3	B.Santosh Kumar	Contemporary Trends In Business And Management/E-Business Management: Concepts And Successful Factors	2020	ISBN 978-93-87418-07-3	Aurora's PG College(MBA) - Uppal, Hyderabad	Vrinda Publishing House
4	Dr.N.Hemalatha	Recent Developments in Cloud Computing/Implementation of cloud computing in Educational Institutions	2020	ISBN 978-93-85518-13-3	Aurora's PG College(MBA) - Uppal, Hyderabad	Vrinda Publishing House
5	B.Santosh Kumar	Recent Developments in Cloud Computing/Role of Cloud Computing in Business Development	2020	ISBN 978-93-85518-13-3	Aurora's PG College(MBA) - Uppal, Hyderabad	Vrinda Publishing House
6	Dr.N.Hemalatha	Cashless Economy: Problems and Prospects/Impact of Digital Marketing on Indian Economy	2020	ISBN 978-81-933393-2-9	Aurora's PG College(MBA) - Uppal, Hyderabad	EduPedia Publications (P) Ltd.
7	P.Harika	Cashless Economy: Problems and Prospects/Impact of Digital Marketing on Indian Economy	2020	ISBN 978-81-933393-2-9	Aurora's PG College(MBA) - Uppal, Hyderabad	EduPedia Publications (P) Ltd.



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CONTEMPORARY TRENDS IN BUSINESS AND MANAGEMENT

Dr. N Hemalatha
Dr. Jayasheela



VRINDA PUBLISHING HOUSE

CONTEMPORARY TRENDS IN BUSINESS AND MANAGEMENT

Editors

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Dr. Jayasheela



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Hyderabad • Chennai

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CONTENTS

S. No	Title	Page No
1	Corporate Social Responsibility in Today's Competitive World <i>Anudeep Aurora Nimmatoori</i>	1-5
2	Innovative HRM Practices to Enhance Organizational Performance <i>Dr. N. Hemalatha</i>	6-8
3	Impact of Digitization on Indian Economy <i>Dr. M.V. Narasimha Rao</i>	9-15
4	Brand Influence on Retail Buying Behaviour <i>P. Lalitha Praveena</i>	16-21
5	Organizational Climate, Leadership Styles and Employee Behavior – An Empirical Study <i>Dr. Jayasheela</i>	22-26
6	Corporate Social Responsibility and Its Impact on Financial Performance With A Special Reference of Reliance Industries Limited <i>Venugopal Reddy Ch</i>	27-33
7	Customers' Perception Towards Service Quality in Hotel Industry in Vijayawada: An Empirical Study <i>Dr. T. Kiran Kumar</i>	34-39
8	Snapshot of Financial Innovation in India: An Empirical Study <i>Dr. Neetu Sachdeva</i>	40-45
9	Green Marketing: Opportunities and Challenges <i>Priyanka Vemula</i>	46-49
10	Financial Inclusion in India <i>Dr. G. VijayaSree</i>	50-55
11	The Role of the Corporate HR Function in Global Talent Management <i>Sai Chandu K</i>	56-71
12	Micro Financing: A Tool For Poverty Alleviation and Rural Growth in India with Emphasis on The States of Telangana and Andhra Pradesh <i>K. Padma Kiran</i>	72-78
13	Talent Management: A Comparative Study of Public Sector Banks And Co-Operative Banks In Gulbarga District <i>Dr. Balagar Jyothi</i>	79-84
14	A Study on Implementation of Goods and Services Tax (GST) in India: Prospects and Challenges <i>Kotaiah Voruganti</i>	85-90
15	Paradigm Dimensions of Digital Banking <i>N. Shital</i>	91-95
16	E-Commerce and Online Purchase Behavior: A Theoretical Framework in Consumers' Perspective <i>Surbhi Gambhir</i>	96-105
17	Impact of Social & Digital Technologies on Employee Engagement <i>Anjali Kalleda</i>	106-109

18	Contemporary Issues in Venture Capital Finance for Women Entrepreneur <i>K. Naupal Reddy</i>	110-115
19	Investors First Avenue - Mutual Funds <i>N. Remuka</i>	116-123
20	The Role of Six-Sigma in HR Transformation <i>Usha Kumari Mantha, Jyothidwivedi & Ch. Mahesh Kumar</i>	124-128
21	Enterprise Risk Management <i>P.S. Subha Pradha</i>	129-133
22	The Contemporary Trends of Marketing <i>Gowri Pisolkar Deshpande</i>	134-139
23	Role of Financial Institutions in Retail Banking Innovation <i>Pusala Sreenivasulu</i>	140-147
24	Knowledge Based Development - Buzz Word of Today's Economic Scenario <i>K. Srivani</i>	148-154
25	Marketing excellence- Awaam's way: A Case Study Approach <i>Chaitra S Hiremath & Mohan Bailpattar</i>	155-158
26	How Does The GST Effect on Stakeholders of The Indian Economy <i>Dr. Sankara Rao Karri</i>	159-166
27	Technology Led Innovations in The BFSI Sector <i>U.L. Sunitha</i>	167-171
28	Branding Perspectives of Business Schools <i>Vijay R & KanyaKumari</i>	172-175
29	Failure of Dual Career Couple Expatriation <i>Laxmi R Math & Dr. V. Mahalaxmi</i>	176-181
30	The Impact of Management Information System (MIS) on Performance of Gurukul <i>Swapna Afzalpurker</i>	182-186
31	Role of HR in Creating, Sustaining Ethical Values of an Organisation <i>Dr. P.R. Prasanna Rekha</i>	187-190
32	Emerging Trends in People Management And The Role of HRM <i>Dr. G. Sreenivas Reddy & Dr. Raghu Naga Prabhakar</i>	191-195
33	Micro Finance Institutions- A Challenging Task Ahead <i>Dr. C. Vijendra</i>	196-200
34	Job Profile of Women Employee: A Study on Psycho-Physical Factors in ITES Sector <i>V. Krishna Priya</i>	201-205
35	Financial Innovation <i>M. Sumanda</i>	206-208
36	Study on The Trajectory Path of Infrastructure Projects in India <i>K. M. Vikas</i>	209-213
37	Business Ethics and Values in the Present Corporate World <i>T. Kishore Kumar</i>	214-216
38	Women Managers Position: Challenges And Promotional Initiatives <i>Dr. V. Sree Jyothi, C. Kameswari</i>	217-224
39	Impact of Goods and Services Tax on Manufacturing Sector, Service Sector and Common Man <i>A. Sowmya & A. Nikhil Varma</i>	225-227
40	Consumers Perception Towards E-Mail Marketing <i>Dr. D. Shireesha</i>	228-234

41	Cultural Dynamics (An HR Perspective) <i>Pradnya Sen</i>	235-242
42	Demonetization In India: Impact On Digital Payment System <i>G.N.R. Prasad & G. Rama Krishna</i>	243-252
43	Green Human Resource <i>Swati Shiromani Nagure</i>	253-255
44	Financial Innovation <i>Kiran Ravula</i>	256-258
45	Recent Trends of Bank Assurance in India <i>K. Sushma Chowdary</i>	259-265
46	Impact of Digitalization in Investment Markets <i>P. Harika</i>	266-272
47	Performance Based Cognitive Analytics For Enterprises <i>N. Sundaram</i>	273-277
48	Green Marketing Strategies – A Consumer Perception <i>S. Aishwarya Chandra</i>	278-284
49	Financial Inclusion <i>T. Vasantika</i>	285-292
50	E-Business Management: Concepts And Successful Factors <i>B. Santosh Kumar</i>	293-299
51	Investment Awareness Programmes Through Social Media <i>Dr. A. Arun Kumar</i>	300-303
52	Post-Merger Profitability: A Case of Hongkong And Shanghai Banking Corporation (HSBC) <i>Daravath Balsingh</i>	304-312
53	Capital Budgeting Theoretical Perspective <i>Sura Govardhan</i>	313-316
54	Corporate Social Responsibility- The Indian History And Perspective <i>Dr. Purvi Pujari</i>	317-321
55	Organisation Climate – A Study <i>Dr. Syed Arshad Hussain & Md Zameer Uddin</i>	322-333
56	Financial Innovations in Recent Era: A Conceptual Approach <i>J. Anupama</i>	334-339
57	Sustainable Development <i>Nashara Khan</i>	340-344
58	Digital Marketing Using Social Media Platforms <i>Jyothi Rao</i>	345-349
59	A Study on Interest Rate Fluctuations and Its Impact on Home Loan Borrowers <i>Preeti Jaiswal</i>	350-357
60	Green Human Resource Management <i>Parveen Kahkashan</i>	358-362
61	Ethics-A Diligent Catalyst in Mergers and Acquisitions <i>Dr. Munisha Dubey & V. Padmavathi</i>	363-369
62	A Study on Customer Behavior in Automobile Market <i>Dr. Vijetha Mukkelli</i>	370-374
63	Unbolt The Income in Indian Rural Market - A Study <i>Dr. P. Rajavardhan Reddy</i>	375-380
64	Trends in Digital Financial Inclusion <i>Dr. M. Madhavi</i>	381-385
65	Financial Inclusion in India <i>K. Arjun Goud, Hemalatha Kandepu & Indra Priyadarsini</i>	386-399

66	Evaluation of Six Sigma in Automobile Manufacturing Industries <i>P. Vandana</i>	400-407
67	Role of Tangible And Intangible Rewards on Work Performance at select IT Firm <i>P. Hima Bindu</i>	408-415
68	Customer Satisfaction Towards Modern Retail Formats in Electronics Home Appliances Segment <i>G. Shubhakar & K. Sanjay Kumar</i>	416-424
69	Internet Trends, Technologies and Their Impact on Telecom Industry <i>Chukariya Satish Kumar</i>	425-429
70	Managing Workforce Diversity in Organizations - A HR Challenge <i>Umadevi S. Muttagi</i>	430-433
71	A Study on GST with Respect to Indian Economy <i>K. Divya</i>	434-439
72	A Study on Online Shopping of Indian Consumers in Apparel Segment <i>Dr. B. Mohan Kumar</i>	440-446
73	Financial Innovation in Emerging Markets <i>R. Kusuma</i>	447-450
74	Talent Management - A Competitive Challenge Influencing HRM and A Key Business Requirement <i>Seema Nazneen</i>	451-456
75	Future of Fintech for Financial Inclusion <i>T. Kiran</i>	457-461
76	The Impact of Market Research on Digital Marketing <i>G. Laxmi Priya</i>	462-465
77	Workload Management of Hospital Staff <i>A. Sravani</i>	466-472
78	Financial Innovation <i>K. Pooja & Prashanthi</i>	473-474
79	A Strategy to Financial Inclusion <i>Srilatha, Dr. Lokanandha Reddy & Dr. Martina Rani</i>	475-478
80	Transformation of the European Financial Systems <i>Dr. M. Loganathan</i>	479-484
81	Orginasational Theory Design and Change <i>Sampath Kumar Uppu</i>	485-491

INNOVATIVE HRM PRACTICES TO ENHANCE ORGANIZATIONAL PERFORMANCE

Dr. N. Hemalatha *

Abstract:

The role of HRM in enhancing organizational performance is more relevant than often assumed in both research and practice. HRM affects organizational performance; this study examines both the individual and the organizational level of innovation, focusing on HRM and HR practices and how these can enhance innovation, while introducing mechanisms explaining the relationship between HRM and innovation.

The purpose of this article is to study the human resource management (HRM) relevance in innovation, environmental management and organizational performance. Literature review on the related fields of study including conceptual framework, resource-based view and organizational performance have been done. This paper aims to fill the gap in the organization performance literature by highlighting the contribution of HRM in influencing business organizational performance through its intermediate effect on innovation and environmental management.

Keywords: HRM, Innovation, Environmental Performance, Organizational Performance

"You Can Have The Best Strategy And The Best Building In The World, But If You Don't Have The Hearts And Minds Of The People Who Work With You, None Of It Comes To Life."-Renee West, Luxor and Excalibur Hotel

Introduction

Human Resource Management is the process of recruitment and selecting employee, providing orientation and induction, training and development, assessment of employee (performance of appraisal), providing compensation and benefits, motivating, maintaining proper relations with employees and with trade unions, maintaining employees safety, welfare and health measures in compliance with labour laws of the land.

Many HR departments are responsible for organization development that generates the culture of the organization. They are charged with oversight responsibilities to ensure that their organization appropriately builds teams and inspires employee empowerment. HR management can include employee and community outreach. They are frequent mentors and members of employee teams that address philanthropic giving, employee engagement activities, and events that involve employee families.

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HRM functions are also performed by line managers who are directly responsible for the engagement, contribution, and productivity of their reporting staff members. In a fully integrated talent management system, the managers play a significant role in and take ownership responsibility for the recruitment process. They are also responsible for the ongoing development of and retention of superior employees.

HRM's Changing Focus

HRM is the organizational function that deals with or provides leadership and advice for dealing with all issues related to the people in an organization. HRM, as such, deals with compensation, hiring, performance management, organization development, safety, wellness, benefits, employee motivation, communication, administration, and training.

HRM is also a strategic and comprehensive approach to managing people and the workplace culture and environment. Effective HRM enables employees to contribute effectively and productively to the overall company direction and the accomplishment of the organization's goals and objectives.

HRM is moving away from traditional personnel, administration, and transactional roles, which are increasingly outsourced. The HRM function is now expected to add value to the strategic utilization of employees and to ensure that employee programs recommended and implemented impact the business in positive measurable ways.

The New Expectations of HR

Gone are the days when HR staff received direction from the executive team as to their priorities and needs. HR is now expected to sit at the executive table and recommend processes, approaches, and business solutions that improve the ability of the organization's people to effectively contribute.

The new role of HRM involves strategic direction and HRM metrics and measurements to

demonstrate their value. Employees who work in HRM must demonstrate their value by keeping their employer and company safe from lawsuits and the resulting workplace chaos. They must perform a balancing act to serve all of an organization's stakeholders: customers, executives, owners, managers, employees, and stockholders.

It is difficult to underestimate the importance of an effective, modern HRM function within an organization.

Today's human resource department is the backbone of a successful organization. Organisations which choose to move the HRM function out of the dark days and into the light - are best served. Few of the

World's most Innovative Corporate Human Resources Departments are

At Google: From Fortune to Mashable to Glassdoor, Google is consistently ranked as the best company to work for in the world. What truly makes Google a great place to work is the people. The company is more than just an Internet juggernaut, its Mountain View, California headquarters offer a seven-acre sports complex, three wellness centers, indoor roller hockey rinks, horseshoe pits, and over 100,000 hours of subsidized massages doled out each year. Google's philosophy is that with the right tools, you can attract the best talent, and develop happier and more productive employees. With these HR efforts, Google's leadership is recognized worldwide.

At Cadbury

When it comes to people management, Cadbury leads the way. Not only is the company the world's second largest confectioner, but it has also earned the HR accolade by putting its people first. Since founded in 1824, Cadbury has maintained its worker village and R&D factories. The village offers its staff and their families a comfortable environment to work and live. The company is built on an altruistic belief system that makes people a

priority. The Cadbury culture combines positivity and balance, among work and life.

At SAS

In 2014, SAS was ranked No. 2 on Fortune's list of the Best Companies to Work For in the US. The HR practices at SAS are innovative and creative; contributing to the reason the company is consistently ranked as an industry leader. The company offers a university campus feel on its grounds, with greenways that connect buildings to buildings. Recreation and fitness facilities are found on campus, offering time for employees to take part in maintaining the health of the entire person - mind, body, and spirit. SAS is noted for offering a high-trust environment and exhibiting a low turnover rate. The HR department is recognized as a pioneer in addressing day-to-day stresses and concerns that are common in a workplace environment.

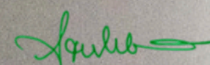
Conclusion

In the present competitive world, the companies are facing a lot of skill shortage, talent crunch and attrition. The companies feel the internal

customers also are equally important along with the external customers. So every company tries to devise innovative HR practices to attract best talent, giving them nice environment to work with, that enables the company to retain talents, the above said practices are conceived and implemented and found successful by the leading companies. It is found that practices of different companies' merging in different HR areas, which are beneficial for the company's to become more competitive in the global market.

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IMPACT OF DIGITIZATION ON INDIAN ECONOMY

– Dr. M.V. Narasimha Rao *

Abstract:

Right information to the right user at the right time has been the aim of information professionals. Recent developments in the information and communication technologies, especially the Internet and the Web based technologies have brought significant changes in the ways the information generate, distribute, access and use. The waves of adoption and usage of ICTs (Information and Communication Technologies) have revolutionized our world by introducing distinct technology enabled services in every sphere of our lives. There are various applications of ICT, digitization is one of them. Digitization is a process of converting the diverse forms of information, such as text, sound, image or voice into digitalized format. The digitization has a proven impact on economy and society by reducing unemployment, improving quality of life, and boosting access to knowledge and other public services. The process of digitization is marked by cost effectiveness to cut the cost that incurred in various knowledge practices related to the production, organization and communication of information that makes long-term economic growth. The process of digitization facilitates to preserve, access, and share an original document to the people worldwide that may only be available earlier to those who visit its physical location. A number of measures are taking in the field all over the world and in India, to conserve and preserve the knowledge of the past and present for the upcoming generations. This paper highlights the concept of digitization along with the social economic and ecological benefits of digitization of knowledge and information.

Keyword: Digitization, Economical impact, Ecological benefits, societal impact, cultural heritage, preservation, open access.

INTRODUCTION

The process of digitization makes the invisible to be visible. A number of users can access the same document at the same time without hindrance. It also removes the trouble of distance, as users do not have to travel to locations that possess the hard copies of materials. Although, digitization is a time consuming and very expensive venture, but, it is a powerful way to cope up with the problems of persistent shortage of periodicals and other technical literature in institutions, universities and technological schools in the developing world. Numerous organizations and institutions are taking initiatives in digitizing their documents, archives of newspapers, artifacts, theses and dissertations and other historical documents and images. This helps scientists, administrators, students, and other information seekers to have, wide access

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to innovations possible at a right time which are earlier outside their domain. Digitization defines by many scholars in a variety of ways. Some of them are as follows: Witten and David (2003) define Digitization as, the process of taking traditional library materials that are in form of books and papers and converting them to the electronic form where they can be stored and manipulated by a computer. The US Institute of Museum and Library Services (IMLS) defines digitization as the process of converting, creating, and maintaining books, art works, historical documents, photos, journal, etc. in electronic representation so they can be viewed via computers and other devices.

NEED FOR DIGITIZATION

The basic idea of digitization is to make full use of ICT facilities for accessing worldwide resources and beneficial for society at the same time. As going digital is the need of the hour, to remain environment healthy and safe. Various organizations are involved in digitizing their material because they remain influenced of the enduring value of such resources for learning. Digitization also raises the reputation of the institutions as global users can know the institutional collection and utilize these resources from distant locations. The main reasons to digitize are to enhance access and improve preservation. By digitizing their collection, institutions can make information accessible that was previously only available to a select group of users. Digitization can also help preserve materials making high-quality digital images available electronically and may reduce wear and tear on brittle and fragile documents.

BENEFITS OF DIGITIZATION

Developing a digital substitute of rare, brittle or fragile original documents can provide access to users while preventing the original from damage by handling or display. This is the motivation behind the digitization of many artifacts. Following are the certain benefits of digitization.

The documents can be viewed from anywhere, at any time of the day

The documents can be printed directly from the web

Users can find what they are looking for promptly and independently

It can save staff reference time by answering frequently asked questions on the web

It can enhance images electronically so that they can be viewed with greater legibility

It increases use of collections and facilitates learning and scholarship

The documents do not have to be re-shelved or located by staff

The documents are not handled frequently which lessen wear and tear

Apart from the general benefits that are discussed above, there are certain specific benefits of digitization that may help in making the society economically and ecologically sustained.

ECONOMIC IMPACTS OF DIGITIZATION

The consequences of the developments in the technicalities of Information and Communication Technology introduce the concept of digitization. The transformation from print to digital media for communication of information to the larger community is resulted from the growth of the Internet and now enables the tremendous amount of information accessible to everyone. By the process of digitization, knowledge to an ever greater amount is being produced, processed, communicated and preserved digitally. The economics related to the concept of digitization is twofold. The first one, how economic is the process of digitization and second, its impact on the economy of the countries.

DIGITIZATION: HOW MUCH ECONOMIC IT IS?

The economy related to the process of digitization is mainly realized through the ways that involves in creation, preservation, dissemination and

use of digital information. Digitization of information seems to be quite valuable and economical for the present society. However, the process of digitization at its preliminary stages is not considered economical, but its inexpensive impact can be realized in later stages, in terms of increasing returns, zero marginal cost and long-term usage of digitized content by the larger community. Digitization, despite being expensive at the initiative level such as designing a website, scanning of documents, well edited text and navigational aids, fast hardware, software packages and good connections/bandwidths, continual migration to new technology, etc., it saves much of the production costs and reasonable in comparison to the conventional form of distributing system of information. The cost that saves in the digitizing technology is other way round and it reduces the marginal cost of production of documents. The cost lie in the staff digitizing the work, the computer system and the effective flow of information over the internet is mainly fixed cost or first copy cost. The marginal cost of issuing many copies of one document is quite less. Digitization provides long-term benefits for the society, although it may take many years to realize these benefits fully. Thus, the economy of digitization involves short-term investments and in return get long run benefits. In today's society, electronic sources are the example of the new and changing models of delivery of information. The access to the digitalized information through electronic sources, such as e-journals, consortium, online databases and other like resources save much cost than that spent in subscribing print sources. The cost of purchasing the information online, in spite of buying it in print form is saving much of the expenditure. As the cost related to buying the print sources include storing, shelving, as well as the costs related to the physical storage of the content, which are the direct cost to the organizations. The shift to purchasing electronic content has reduced the cost of maintaining the physical materials, although has somewhat increase in cost of preserving the content. The cost of networking technology has been decreased over the years as well, and makes access and dissemination

of digital information more cost-effective and economical to the creators, distributors and information seekers. In addition to this, widespread inexpensive access to digital information has benefitted the large mass of users. There are some institutions that may realize savings from other forms of publication or distribution i.e. by developing digitized collections as online access becomes the preferred delivery method for knowledge contents. Developing a critical mass of digital content as electronic reserve, or short-loan collections may enable savings in the institutions (libraries, etc.) by reducing the library hours, or staff time, needed to manage such labour-intensive task. Besides, such practices can also replace the postal cost of print information contents with web based documents and this sort of savings is considered as indirect benefits of digitization. Therefore, it is not only brought financial benefits, but also, some value added benefits such as user satisfaction and advancement in learning and research. With no definitive evidence base to give concrete numbers about the economic value of digitization to an institution, Many factors will come into play when evaluating the value of digital resources, but these factors may help in assessing when digitizing collections can be cost effective or not. Valuable digital resources, which will bring prestige to the institutions that are creating and maintaining them, and support scholarship without any loss of the benefits of working with the originals. In the same context of reducing the cost, open access publishing is one of the impacts of digitizing technology. The open access model is based on the long term preservation and dissemination of documents at least cost that is quite high in the conventional and closed medium of production. Open access is the free availability of scholarly material over the web, one can freely read, download, reuse, and redistribute the documents in the open access environment for non-commercial purposes only. Open access resources include Institutional repositories, online databases and many e-journals, etc., and these are quite advantageous in terms of production and access of scholarly material over payment-based systems. As restricting access to information is costlier and required much

labour and cost in implementing security systems, billing procedures, maintaining databases of authorized users and responding to queries that add complexity to the simple process of mounting information on a computer and providing access via the www. However, it is true that open access information on the web is not free to produce, but it is considerably cheaper than conventional publishing and nearly all cost is fixed cost. Digitization will be sustained far away, if it brings long-term revenue for the creators and producers of digital knowledge contents. Hence, the potential of digitization is laid in replacing and improving the existing services and get the maximum by serving the largest with the same number of available resources, i.e. staff and budget.

IMPACT ON ECONOMY

In any geography, the factors related to adoption and usage of digital technology, such as pricing, reliability, speed, and ease of use determine the level of digitization, which in turn has a proven impact on reducing unemployment, improving quality of life, and boosting citizens' access to public services. Digitization allows governments to operate with greater transparency and efficiency, and it has a dramatic effect on economic growth, but not all at once. In the current sluggish worldwide economy, the use of digital technologies is served as a means of boosting economic activities. The mass adoption of digital technologies through connected services and devices has proven to accelerate economic growth and facilitate job creation, however, its impact is not uniform in each country. Developed economies enjoy higher economic growth benefits from digitization, such as growth and productivity, but, as compare with emerging economies have less gain in terms of jobs. The main reason for the differing effects of digitization is the economic structures of developed and emerging economies (Darwiche & Singh, 2013). The report, published by Booz & Company, discussed the effects of digitization on economies around the world. The Booz & company, a management consulting firm to measure the impact of digitization on crosscountry

economic progress initiated a study by developing a digitization index, a measure of country level of digitization. For this purpose, the Digitization Index is tested to measure the effect of digital techniques on economic growth, unemployment rate and on societal benefits. The countries were divided in four categories such as digitally Constrained, Emerging, Transitional or Advanced, on the basis of digitization activities and contribution of digitization to economic growth, job creation and welfare of the society. These divisions are discussed below (Darwiche, Singh & Koster, 2012).

Constrained economies (those with a digitization score below 25) have barely begun to develop affordable Internet connections. Internet services remain expensive and limited in reach.

Emerging economies (those with a score between 25 and 29.9) have achieved significant progress in providing affordable and widespread access.

Transitional economies (those with a digitization score between 30 and 39.9) provide citizens with ubiquitous, affordable, and reasonably reliable services, and usage is expanding at a relatively rapid pace.

Advanced economies (those with a score of 40 and higher) are in the most mature stage of digitization. These countries have a talent base that can take advantage of digital services.

The calculation of the Digitization Index for 150 countries in 2010 reveals that countries tend to follow four clearly development stages. The cluster of countries, which categorizes under Constrained the very low, emerging the low, Transitional the medium, and the Advanced. As the Digitization process reflects a shift in the socio-economic status and this systematic transition is examined for its effects on economic growth, job creation and welfare. The effect of digitization on a country's economy is highly visible. According to the report, in 150 countries, an increase in digitization of 10 percentage points triggered a 0.50 to 0.62

percent gain in per capita GDP. By contrast, access (as measured in studies of broadband penetration) contributes a gain in per capita GDP of just 0.16 percent approximately half as much impact. The more advanced the country, the greater the impact of digitization appears to be, which establishes a virtuous feedback cycle: A country reinforces and accelerates its own progress as it moves along the line. On the basis of data from 2009 and 2010, we estimate that the total global economic impact of digitization, in terms of added GDP, was US\$395 billion per year. Digitization and economic growth within a few years, digitization has shaped a large part of the economy and touched a wide breadth of economic activities. It has changed societal connections, developed new industries and diluted others, and redesigned the people's capabilities to access and disseminate knowledge.

IMPACT ON EMPLOYMENT

The introduction and advancement in Information and Communication Technology has a greater impact on employment, as it creates more jobs in the IT sector, which may be related to software development, Outsourcing, hardware manufacturing and other IT related businesses. In addition, the impact of these technologies has been realized on other service sectors, like in trade, industry, financial and health care services. Darwiche, Singh & Anediwalla, (2012) presented a Booz & Company's econometric that analysed a reduction in nation's unemployment rate by 0.84 % due to 10% increase in digital activities. By the advancement in digitization related activities, there an estimated 19 million jobs were added to the global economy from 2009 to 2010. During 2007 to 2008, a more five % increase is seen in estimated 18 million jobs. In another study of Booz & Company's, it is observed that digitization in 2011, produced a US\$193 billion boost to world economic production and generated 6 million new jobs in 2011. In the same year in the Middle East and North Africa alone, digitization resulted in an extra \$16.5 billion in output and nearly 380,000 new jobs (Darwiche & Singh, 2013). This global creation of hundreds of

millions of jobs in the last few years has brought a great boom in the society that can highly contribute to the economy of the country. Thus, digitization accelerates economic growth and prosperity of the country by facilitating job opportunities to the peoples.

SOCIAL IMPACTS OF DIGITIZATION

One of the most interesting and important factors related to digitization is the link to overall societal welfare. Digitization, as a social process, enables the institutions to generate, cooperate and create larger for the benefits and progress of the society through digital communications and applications. The process of digitization involves the mass digitization of books and older and rare materials. For the purpose of preserving the knowledge contents for future generations or making them available to a much wider community than could ever access the physical objects, many of the institutions (libraries and cultural archives) have started digitization initiatives to provide access to the history of societies, countries, cultures and languages. According to Hughes (2003), more than a last three decades, cultural heritage institutions (libraries, archives and museums) have incorporated technology into all aspects of their mission and services. By digitizing their resources, cultural heritage institutions can make information accessible that was previously only available to a selected group of users. For digitization, a number of libraries, archives, museums and publishers have been scanning their older documents and rare images for many years and catalogued and made them available through the World Wide Web. However, the process of digitization is not only means of preservation of knowledge contents, but also protecting these delicate and rare originals documents from heavy wear and tear when presenting to a large community. By providing access to digitized item online, institutions enable the users all over the world to view the information at different time sequel or simultaneously. Also, the users no longer need to invest much time and money to visit the physical location for an item. According to Mulrenin and

Geser (2001), this conversion of all types of valuable and cultural contents into bits and bytes gives rise to a new dimension of reaching towards the vast audience making availability to valuable cultural resources in ways that were not possible in the past. Thus, users from all over the world are depending on the ease and speed of digital access for unearthing many new and rare resources, of which they never have any knowledge or found in print collections. Moreover, the digitization is facilitated awareness, research and promotion of both past and present culture and knowledge, also has a direct impact on overall happiness and satisfaction of the people that they get from the capacities and capabilities connecting with digital technology.

ECOLOGICAL IMPACTS OF DIGITIZATION

During the last few decades, healthy living has become the major concern of society. There has been an increased focus on health related matters. This has led to more people exercising, eating right and using things like cars and power strips less and other techniques to benefit the environment. The initiative has resulted in individual taking a closer look at the environment and examining their part in making the Earth more sustainable for years to come. As this trend spreads, the sentiment is now being felt at organizations and institutions. Some innovative employees have spearheaded campaigns for workers to use less power by shutting down machines at night, paying more attention to reusing coffee and water cups and numerous other things such as going paperless i.e., digitization is also one of the way to protect and save environment. Little by little, these factors can help the Earth to become ecologically sustained. The paper industry is the third greatest contributor to global warming emissions. One ream of paper can generate 18.5 pounds of carbon, excluding transportation and shipping at a direct cost of \$4 per ream. With the average worker consuming some 10,000 to 12,000 sheets of paper per year, a department of 20 employees is generating over 8,880 pounds of carbon for paper consumption alone. Condon (2013) describes the news given by

Whistler about the positive effects of paperless billing on environment as "when companies embrace paperless billing-not even entirely digitizing numerous environmental benefits can be seen. Invoices between business partners, as well as those sent as bills to clients, can be shared online, eliminating countless reams of paper that would otherwise be used. There are many other ecological benefits of digitization:

Cutting tie with paper will permit an organization to transition to make their operations more environmental friendly.

Saving paper equates to saving trees and using less overall supplies, which could position an organization ahead of its competitors in terms of positive user sentiment.

With digital documents and a document solutions program, organization will no longer have to worry about using hours or even days of time looking for lost documents. Instead, everything will be available instantly via a computer search.

Digitisation can help organisations to take advantage of new technologies and allow staff to access records in any location it turns help in making ecological sustainable society as the person does not use vehicle to go here and there and it controls pollution.

CONCLUSION

Digital conversion of print sources has improved rapidly in the past few years. Digitization is the social transformation started by the massive adoption of digital technologies to generate, process, share and manage digital information. Digitization is an inclusive technique of preservation and access by which all the institution's assets are transformed into digital and creating high-quality copies in digital format. It provides advanced opportunities for preservation and access to knowledge contents, also it changes the ways in which collections are used and accessed. Emerging digitization initiatives and ways in which institutions are becoming digital are causing various effects on economy, society and academics as well. These

radical and rapid changes make the information presentation and distribution more rapid, open, and global access to the information than has been available in the past. In addition, converting material from analog to digital format reduces some of the costs included in digitization operations for providing access to print sources. However, the digital copies should not be a replacement for the original items of knowledge. Digital files are not permanent and should need a regular maintenance and transformation to newer formats. For utilizing the full benefits from digitization, organizations should select the material carefully for digitization and digitize only those items that will provide the maximum benefit to both administrator and user. Because, successful digital projects are the outcome of careful evaluation of collections, and also, careful assessment of the institution's goals and priorities and development of thoughtful strategies will assure that meaningful, high-quality digital versions are created, and that both original and digital assets are managed well over time.

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E-BUSINESS MANAGEMENT: CONCEPTS AND SUCCESSFUL FACTORS

– B. Santosh Kumar *

Abstract:

The merge of the information technology and the web standards have formed the electronic business "E-business". Succession in e-business will need organizations to revise their strategies and goals to meet market rules of demand and supply. Conversion of ordinary business into e-business has forced organizations to be redesigned and reshaped. E-business is a combination of economic, technology and market forces that reinvented strategies of traditional business. The business process is counted to use the power of computers and communication networks which are known as Internet. This can allow organizations to stay competitive and more efficient. Also, new business models have been introduced and implemented in a variety of ways. E-business and Internet have enforced organizations to use new and combined models. This enforcement drove organizations to seek and create solutions to the issues of change management. One of these issues is business process reengineering which is redesigning the processes of an organization's business to the optimum to meet their goals.

Keywords: E-business, Succession, Re-engineering

Introduction

Internet is changing the international economy. By exploring the abilities and possibilities of information technology, computers and communication networks which have created a very cheap way for organizations to transform their business and activities, enhance their relationships with their partners and other stockholders and create new market opportunities. The ease and world wide usage of Internet have increased the challenge and competition between organizations to invent and create new methods to be leaders in e-business. This report reviews the factors of change management in implementing e-business and

assesses the importance of each. It concludes with the main success factors in managing change, organizational structure change in response to e-business and human aspects management in implementation of organizational change.

What is Management?

Management is the process used to accomplish organizational goals through planning, organizing, directing and controlling organizational objectives. The planning is forecasting and determining the best strategies to achieve organizational goals and objectives. While the organizing is the implementation of those plans to

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achieve the goals and objectives of the organization by designing the organizational structure, setting employees and employment rules and regulations and creating conditions and systems that insure that everyone and everything works together. After that, directing is required to guide and motivate others to work effectively to achieve the goals and objectives of the organization. Finally, business will need controlling to determine whether or not the organization is progressing towards its goals and objective and how necessary to take corrective actions if needed (Nickels et al, 1990).

Good managers will always have contingency plans as backup plans in case primary ones fail. Also, a model known as management by walking around is very effective. It requires managers to interact with employees and customers to learn their wants, needs and suggestions (Nickels et al., 1990). This kind of managements will lead managers to new ideas in marketing, sales, etc. which can change goals, objectives, structure and culture of the organization. This change by itself will need management.

What Is E-Business?

It is a method of running business using Internet where all the financial transactions can be conducted over web with suppliers and customers online. Industrially, e-business is defined as "All about time cycle, speed, globalization, enhanced productivity, reaching new customers and sharing knowledge across institution for competitive advantage" said by Lou Gerstner, chief executive of IBM. It is a business change where adoption to constraint and continual change is needed to manage transitions smoothly, to improve operating efficiencies that will strengthen the value provided by the business to the customers. Going far beyond buying and selling over Internet, e-business is the relation to the whole chain of organization business from raw materials through to satisfied customers (E-Business Systems Integration Center, uda). E-Business is more than the implementation and operation of an electronic front-end. It requires the

development of new strategies for using and managing real-time information, reorganize inventories and distribution system activities, and establishing new inter-organizational relationships.

Why E-Business?

The opportunities that e-business may present to an organization business are vary. Some of these opportunities include improving existing business process and reduction of transaction cost. But the survival challenge and competition are the main reason of turning into e-business. Its advantages are increasing purchasing opportunities and options within an open market, round-the-clock services and fast and accurate information exchange. While the disadvantages can be differently measured by organizations depends on geographical location, Internet bandwidth limitation, applying new skills and recruitment and difficulty in measuring the return on investment. (E-Business Systems Integration Center, udb).

Becoming an E-Business

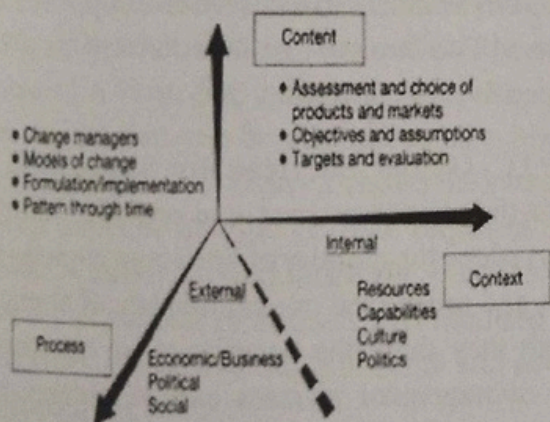
The Internet gave the opportunities to consumers and businesses to quickly and easily buy and sell products by providing some features like electronic presentation of goods and services, on-line ordering and payment processing, automated customer account inquiries and on-line bill presentation. Consumers are having an advanced customer services by delivering on-line and dynamic solutions to them. (E-Business Solutions, ud). To take the advantages of the opportunities that e-business is representing requires a strategic planning and forecasting, re-discovering business resources, manufacturers, suppliers, distributors and other stakeholders. Wither it is business to business (B2B) or business to consumer (B2C) companies, both will have to manage the change that will be necessitated by e-business in order making the benefit of e-business (Chaffey, 2004). E-business requires understanding the business needs and skills and resources to design, implement and maintain superior solutions. It will require changes in the organization

structure, culture and staff responsibilities. It needs knowledge, experience and tools that can deliver the promise and potential of e-business (Chaffey, 2004)

E-Business Aspects of Change

Chaffey (2004) said that main change aspects required are market and business models, business process, organization structure, culture and staff responsibilities and technology infrastructure changes. He added that change aspects will be key factors for an organization to be agile to responding to market place changes and delivering competitive customer service. Also, Pettigrew and Whipp (1993) have emphasized that a successful change will be a result of the interaction between those aspects and defined them as content, process and context or what, how and where (See figure 1).

Figure 1 Aspects of Change: Three Essential Dimensions (Pettigrew and Whipp, 1993)



What are the objectives, purpose and goals of the change, how the change can be implemented, and where the change will be, is it internal, external or both? Answering these questions will help to solve the issue of change management in converting the business from ordinary basis into e-business and achieving a successful result (Value Based Management.Net, 2005a).

Market Place and Business Model - What?

Integrating digital marketing into an organization will need to redesign the objectives, purpose and goals of the organization. Managers will face challenges to define strategies and best practice approaches to meet the new goals of the organization and to set practical solutions to those challenges. But, Achieving those goals and objectives by applying digital technologies emphasizes the importance of deploying E-business to align with and impact business and marketing objectives and using technology to support this, rather than leading with technologies and applications. From this definition we can understand that technologies like web, e-mail, mobile, etc should not drive organizations to get involved with the technology itself and continue developing and building applications. But, they should concentrate on the business returns from gaining new customers and maintaining relationships with existing customers (Chaffey and E-Consultancy, 2005).

Organizations can use a capability maturity model to Review current approaches and identify areas for improvement, benchmark with competitors who are in the same market sector / industry and in different sectors, identify best practice from more advanced adopters, set targets and develop strategies for improving capabilities. Organizations can determine their e-business capabilities with other organizations by using a 5 stage capability maturity model (CMM). The five stages of this model are unplanned, diffuse management, centralized management, decentralized operations and integrated and optimized. CMM concentrates on content and managing the integration with enough experience, visitor acquisition by structuring approaches in certain areas, controlling the conversion to meet objectives and goals, retention the integration with market activities and optimizing the approaches (Chaffey and E-Consultancy, 2005).

Business Process Reengineering (BPR)

- How?

E-business has driven organizations to open markets and competition where no longer to enjoy the protection of our own country's borders as we could in the past. Today, in a global economy, worldwide customers are more sophisticated and demanding. This will require organizations to examine new goals that need redesigning work and business process. According to Hammer and Champy this can be a radical redesign from the ground up (Answers.com, ud). They called it reengineering that is determined by open markets and competition (Answers.com, ud). BPR should deal with processes redesign and manage the change rather than automate existing tasks and functions (Answers.com, ud). It is a methodology that needed to do the change. An example of BPR methodology is the organizational change process (OCP). It comprises four major phases. These are preparation, acceptance, implementation and commitment (ebiz.enable, 2005a). If change has been identified, then a decision to proceed should be taken, and communicated throughout the organization. Then, BPR implementation can lead to successful outcomes. BPR at beginning will need to organize pressure for change. For change to be effective, it needs to be implemented at all levels. Employees should share the vision for the organization and also for themselves as individuals (Our South West, 2004).

Organization Structure, Culture and Staff Responsibilities - Where?

The employment status of staff can affect their loyalty to the organization and create resistance to the change. The attitude and behaviour within an organization usually set by senior employees, so their influence on organizational culture is important. Also, in the managerial level, problems can occur when managers won't assign the needed resources to the project (ebiz.enable, 2005b). Prosci has defined the elements that may create a desire not to change as fear of job loss, discontent with the current state, career advancement, acquisition of power or position

and trust and respect for leadership. Those are some of the internal aspects that can affect the change while a union can be considered as an external one where it may have some impacts on the change (Change management learning centre, 2005a). The factors which influence the expectations that individuals and groups are likely to have of an organization are vary. Those factors can have effects on the strategic development of the organization and should be analyzed to identify the expectations of groups and individuals within the organization and wither the strategies reflect the influence of any of those factors. Also, how would those factors help or hinder the changes which would be needed to pursue new strategies should be considered in that analysis (Johnson and Scholes, 1993).

Technology Infrastructure Changes

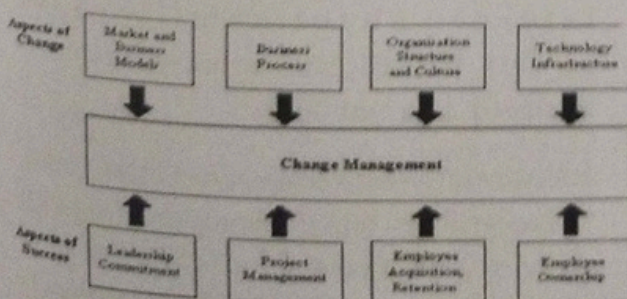
E-business will impose to understand some techniques and terms like on-line and off-line communication, extranet, etc. and these techniques will require a knowledge management, for example on micro-environment like customers, suppliers and computers. The knowle dge transfer will be a key to competitiveness (Chaffey, 2004).

PTC Global Services are suggesting to Automat the change process and provide visibility that can reduce the number of late stage engineering changes and reduce the overall number of changes. Although they think the benefits of an automated change management process can be clearer and better then using methods to implement the solution. Their solution is to Assess, Deploy and Optimize an approach that leverages industry accepted processes such as CMII. It is a consultancy services that can assess to adopt a clear strategy and cost and benefit analysis for improving change management. Then, deploy the solution by offering installation, configuration, and training services. After that they can improve the solution of the change management process by optimizing it (PTC Global Services, 2005).

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The enforcement of a change will need to process a strategic management to specify objectives, develop policies and allocate resources to implement plans (Answers.com, udb). Change management learning center (2005b) has defined some components of change management based on Prosci's research which was conducted with more than 400 organizations in the last five years. The components are change management process, readiness assessments, communication and communication planning, managers training for change management, employees training and development, sponsorships activities, resistance management, feedback analysis and finally the rewards for succession. Those components actually can be considered as tools or guidelines for applying an effective change and approaching the desired goals of an assigned project. But the aspects of success for e-business are well defined by Chaffey (2004). He defined those aspects as leadership commitment, project management and employee acquisition, retention and ownership. He added that examining those aspects can be on a large-scale project or on a smaller scale that could be a single project. The examination may affect the whole business of a firm. So, it is better to make it on a single project that can be considered as a pilot for the large-scale project. Figure 2 shows the interaction between aspects of change that required to be assessed in order to maximize the benefits of e-business and aspects of success that required to be implemented to achieve those benefits and goals of an organisation.

Figure 2: Key Factors In Achieving Change (Chaffey, 2004).



Leadership Commitment

Kotter (1990) suggested an eight change phases' model for successful leadership. He said that a leadership has to establish a scene of urgency, create a coalition, develop a clear vision and share it, empower people to clear obstacles, secure short-term wins, consolidate and keep moving and anchor the change (Value Based Management.Net, 2005b). The model can be considered as management commitment where the president or senior management can play the role of leadership that should drive the project to the desired objectives (ebiz.enable, 2005c). But Prosci is considering sponsorship as the most important success factor which will need plan for sponsor activities and help key business leaders carry out those plans (Change management learning center, 2005b).

Project Management

When developing an e-business strategy, it is essential to consider business process reengineering (BPR) methodology which is an effective tool to process and manage the change. BPR; as mentioned earlier; comprises four phases. First, the preparation phase which will require the leaderships to make and encourage the employees and other stakeholders to understand and accept the change (ebiz.enable, 2005d). Next, the acceptance phase which will resolve the resistance by training the employees and encourage them to learn new skills (ebiz.enable, 2005e). After that, the implementation phase. It is the most important phase where the involvement to make the change. This phase is to analyze business systems, work flow and relationships; then redesign those processes and implement the change (ebiz.enable, 2005f). Finally, the commitment phase which is to evaluate the change outcome based on organization goals and validity of those goals which will need continuation on revising and improving the process of change (ebiz.enable, 2005g).

Employee Acquisition, Retention and Ownership

This aspect focuses on avoiding loss of valued

employees and makes the employees pro-active members by resolving their resistance to the change to accepting the change. This will need change assessments in areas such as culture and values (Change management learning center, 2005c). The acquisition and retention will require the project leader to set communication plans that can address the needs of the employees from the front-line to the executives. Retention can be strengthened by providing those needs based on the role of the implementation of the change. Retention and ownership issues can be resolved by applying training and development programs that can provide knowledge about the change and required skills. The ownership of employees should be highlighted by rewards during early success and long-term wins (Change management learning center, 2005b).

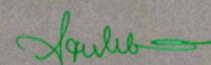
Conclusion

E-business is a change and considered as a global business change. It may affect the whole organization's structure, culture and objectives. This change prospects may differ from firm to another. While it is essential for some organizations to survive, it can be considered as a market competitiveness and leadership approach for others. The best commitment for the change is the management to understand the factors of change and apply the successful ones. The open markets will lead to discover new ideas in marketing and sales. Implementing those ideas may need radical changes in the business or the organization itself. By best practice, applied process of change will need revision and improvement continually.

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CONTENTS

S. No	Title	Page No
1	Cloud Computing and Hybrid Cloud <i>P.S.N. Kumar</i>	1-2
2	Implementation of Cloud Computing in Educational Institutions <i>Dr. N. Hemalatha</i>	3-7
3	Secure and Practical Outsourcing of Linear Programming in Cloud Computing <i>Dale Goutham</i>	8-20
4	Green Cloud Computing: A Review of Literature <i>Ms. Soujanya Patil</i>	21-26
5	Cloud Storage for Health Management <i>Dr. Jayasheela Patil</i>	27-30
6	Impact of Cloud Computing on Information Technology <i>Abhinav Rao Paruvelli</i>	31-37
7	Open Mobile Alliance: A Service Landscape for Cloud Based Mobile Device Management with Gateway Access Object <i>Suraj Prakash Yadav</i>	38-40
8	Emerging Trends in Internet Services with Cloud Computing <i>P. Anweshwar Rao</i>	41-48
9	Security Perception of Cloud Computing with Study of Security Issues <i>Dr. Pradosh Chandra Patnaik</i>	49-57
10	Virtualization in Cloud Computing <i>V.S.V. Mallikarjuna Rao</i>	58-60
11	Cloud Computing - for Startups and High Growth Businesses <i>N. Sundaram</i>	61-68
12	Secure and Practical Outsourcing of Linear Programming in Cloud Computing <i>Ravindra Thorat</i>	69-73
13	Dynamic Load Balancing in Cloud Computing Environment <i>Prof. Kidiyappa Maddennavar</i> <i>Prof. Sandeep Dodmani</i>	74-81
14	Big Data Computing and Clouds: Trends and Future Directions <i>P. Arpitha</i>	82-89
15	Mobile Device Management on Cloud <i>K. Sangeetha</i>	90-96
16	Security Perspective of Cloud Computing: A Prodigious Approach <i>Bellamkonda Rajani</i>	97-101
17	Improving Utilization of Infrastructure Clouds <i>Sanda Akhila</i>	102-118
18	Green Computing: Future of Liveliness <i>Kumari Shalini A</i>	119-123
19	Distributed Cloud Computing <i>Dala Rahul Ji</i>	124-132
20	Basic Survey on Data Mining Techniques in Cloud Computing <i>Praveen Kumar Gopagoni</i>	133-138
21	Cloud Computing An Overview <i>S. Aishwarya Chandra</i>	139-143
22	Design Evaluation of Diesel Engine Piston using Materials CI and Aluminum Alloy <i>Thurai Sai Sharat</i>	144-145

23	Secure Cloud Storage - Countering the Vulnerabilities <i>Savitha Ramesh</i>	146-151
24	Multimedia Streaming Technology in 4G Mobile Communication Systems <i>G. Ravi</i>	152-159
25	A Quantitative Analysis of Current Security Concerns and Solutions for Cloud Computing <i>M. Sree Pavani</i>	160-175
26	Mobile Ad-Hoc Networks (Manet) <i>Adepu Sruthi</i>	176-183
27	A Model Approach of Implementing Data Mining Techniques on Cloud Storage <i>Chayanam Srivalli</i> <i>Mudrakolla Swapna</i>	184-191
28	Design and Optimization of Medical Wheel Chair <i>Thokala Vikram</i> <i>Thurai Sai Sharat</i>	192-200
29	Cloud Computing and the Changing Dynamics of Marketing <i>Gowri Pisolkar Deshpande</i>	201-203
30	Software as a Service-Application's Accounting and Billing on Cloud <i>Rajesh S Budihal</i> <i>Gurubasava</i>	204-214
31	Impact Study of Cloud Computing on Business Development <i>D. Sai Kiran</i>	215-220
32	Real-Time Applications using different Manet Routing Protocols - A Comparative Analysis <i>Sarikonda Vishali</i> <i>Dr. Ramakrishna Seemakurti</i>	221-226
33	Era of Cloud Computing: a new Insight to Hybrid Cloud <i>T. Aruna</i>	227-231
34	An Efficient Power Management Routing Algorithm for Mobile adhoc Networks <i>Gouri Patil R</i>	232-237
35	Cloud Computing in Banking And Financial Services <i>P.S. SubhaPradha</i>	238-243
36	Analysis of Gas Turbine Blade <i>Maloth Heeralal</i>	244-254
37	Hybrid Cloud <i>Anita Dewangan</i> <i>Aishwarya Pillai</i>	255-259
38	Security Ecosystem in IOT and Cloud <i>Gourisetti Sai Surya</i>	260-266
39	Role of Cloud Computing In Business Development <i>B. Santosh Kumar</i>	267-272
40	Research on Mobile Cloud Computing <i>C. Tara</i>	273-276
41	Cloud Engineering <i>S. Sai Surya</i>	277-282
42	Green Computing: Go Green and Save Energy <i>G. Vandana</i>	283-289
43	Recent Developments in Cloud Computing Cloud Network Security <i>M. Anil Kumar</i>	290-294
44	Mobile Device Management <i>K. Vikas</i> <i>G Raghuram Reddy</i>	295-298
45	Data Cloud <i>T. Harani</i> <i>B Sindhuja</i>	299-304

46	A Hybrid Cloud Approach for Secure Authorized Deduplication <i>P. Nandini</i>	305-314
47	Service Oriented Decision Support Systems <i>P. Vandana</i>	315-319
48	Cloud Hosting <i>C Shashidhar Reddy</i> <i>Vasari Venu</i>	320-330
49	An Emerging Technology: Green Computing <i>A. Mallesh Reddy</i>	331-334
50	An Overview of Service Models of Cloud Computing <i>Thanmay Ganta</i>	335-342
51	Resource Allocation Awareness for Efficient Management of Data Centers in Cloud Computing <i>B. Kiranmayi</i>	343-357
52	Virtualization on Cloud Computing <i>G. Deepak</i> <i>K. Shiva Krishna</i>	358-360
53	Cloud Computing for Todays Business <i>K. Shrithi</i>	361-365
54	Security in Cloud Engineering <i>P. Kavitha</i> <i>A. Malathi</i>	366-372
55	Cloud Computing - Deployment Models <i>Dr. D. Shireesha</i>	373-375
56	A Hybrid Cloud Approach for Secure Authorized Deduplication <i>Anthathi Akhila</i>	376-382
57	Conceptual Study of Search Engine Optimization Methods <i>Sadavarte Rajesh Keshvarao</i>	383-389
58	Evolution of Cloud Computing <i>Arvind (PMP)</i>	390-400

IMPLEMENTATION OF CLOUD COMPUTING IN EDUCATIONAL INSTITUTIONS

– Dr.N.Hemalatha *

Abstract

Cloud computing is becoming an adoptable technology for many of the organizations with its dynamic scalability and usage of virtualized resources as a service through the Internet. Cloud computing is an excellent alternative for educational institutions which are especially under budget shortage in order to operate their information systems effectively without spending any more capital for the computers and network devices. By sharing IT services in the cloud, educational institution can outsource noncore services and better concentrate on offering students, faculty and staff the essential tools to help them succeed. In this paper, we will review what the cloud computing infrastructure will provide in the educational arena, where the use of computers are more intensive and what can be done to increase the benefits of common applications for students and teachers and how we can provide the quality education by using the above technology.

Keywords: Cloud computing; virtualization; SaaS.

Introduction

Educational institutions throughout the World have become highly dependent on information technology to service their business requirements. Procuring and maintaining a wide range of hardware and software require substantial, ongoing investment and the skills to support them.

The economies of scale and other features of cloud computing are likely to mean an increasing shift away from institutionally-hosted services. These services are increasingly provided using Internet technologies to staff and students and accessed from web browsers. The services are offered cheaply or freely to education, often with much higher availability than can be provided by the educational institution.

According to Cloud computing it presents a significant advancement in the delivery of information technology and services as it is capable of enhancing collaboration, agility, scaling, and availability. It also provides potential for cost reduction through optimized and efficient computing. Thus, Cloud Computing offers compelling advantages in cost, speed and efficiency by providing on-demand access to a shared pool of computing resources in a self-service, dynamically scaled and metered manner. The cloud is a valuable tool that can be used to improve ICT service delivery for institutions of higher learning and also accessibility to quality education.

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Are we therefore facing a future where the majority of educational services will be hosted in the cloud and institutions no longer host their own data centers with expensive hardware, power bills, staff salaries and computing resources which are rarely fully utilized?

This policy brief has analyzed some of the emerging benefits and challenges of cloud computing for the educational sector.

Characteristics of Cloud Computing

Remote data centre's: Cloud services are delivered via the Internet from high-specification data centre's in locations remote from the end user and their institution. The server farms have features such as the latest cooling systems and service optimization on techniques which individual educational institutions are unlikely to be able to afford. The data centre's are often located near cheap sources of electricity. Their locations are not necessarily known to the user, though in some cases users require services to be located in specified countries due to data protection legislation.

Pooling of Resources: Resources such as data storage, processing, memory and bandwidth are shared between multiple customers and can be allocated dynamically depending on demand. Individual hardware components can be replaced without impacting on performance or availability. Resources may even be spread across multiple data centres to provide better security and resilience.

Pay per Use: Customers simply pay for the services they use while providers bear the costs of hardware and software provision. Pricing may vary depending on the time of day due to peaks in demand or varying electricity costs and institutions may therefore carry out certain activities when costs are cheaper. However distributed cloud networks may enable providers to smooth out demand globally and offer uniform pricing strategies not dependent on timing.

Advantages of Cloud Computing

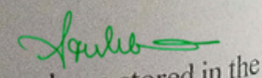
A lot many advantages storing the information in the cloud and a recent conversation about cloud computing with several colleagues in the education field revealed significant advantages:

Reducing Costs: Colleges have constraints such as oversubscribed classrooms, lack of adequate teaching and learning resources to a lack of funding which limits the quality of provision. Cloud computing enables students to log on to a virtual classroom from anywhere offering access to the internet. As such, teaching doesn't have to be delivered face-to-face, it doesn't even have to be in real time. Lessons can be delivered remotely in the form of webinars, webcasts or audibly via podcasts. So that they can reduce the infrastructure and maintenance costs.

Easy access: Lesson plans, labs, grades, notes, PowerPoint slides - just about anything digital that you use in teaching is easily uploaded and accessed anytime.

Stable and Secure: Your data, content, information, images - anything you store in the cloud usually requires authentication (ID and password, for example) - so it is not easily accessible by anyone. No more of carrying devices, such as thumb drives or CDs. You don't need to worry about losing them, damages, or your information not being loaded properly.

Share ability: While working with other teachers you can share your files that you have stored in the cloud. No need of an extra thumb drive or burning another CD or DVD. You just need to share the link containing your file(s).


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Track ability: Make changes to a lesson and want to change it back? No problem. Cloud computing will save multiple revisions and versions of a document so that you can chronologically trace back the evolution of an item.

No photocopies: You can just share the document, pass on the link to other teachers and even students so that the access is pretty simply and avoids paper work.

Round the clock access: You can access your files, presentations and calendars whenever you need, as they are just a click away.

Cloud Computing Framework

According to the Service Models of Cloud Computing are Software as a Service (SaaS), Platform as a Service (PaaS) and Infrastructure as a Service (IaaS). It has been observed that the three models are foundations upon which universities can implement cloud computing, and are described as follows:

Software as a Service (SaaS): The applications are hosted by a cloud service provider and made available to customers over a network, typically the Internet. The applications are accessible from various client devices through either a thin client interface, such as a web browser, or a program interface.

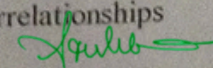
Platform as a Service (PaaS): Is the capability provided to the consumer to deploy onto the cloud infrastructure consumer-created or acquired applications created using programming languages, libraries, services, and tools supported by the provider. The consumer does not manage or control the underlying cloud infrastructure including network, servers, operating systems, or storage, but has control over the deployed applications and possibly configuration settings for the application-hosting environment.

Infrastructure as a Service (IaaS): Is the capability provided to the consumer to process, store and network so that the consumer is able to deploy and run arbitrary software, which can include operating systems and applications. The consumer does not manage or control the underlying cloud infrastructure but has control over operating systems, storage, and deployed applications; and possibly limited control of select networking components such as host firewalls.

Deployment of Cloud Services

Cloud services are typically made available via a private cloud, community cloud, public cloud or hybrid cloud. 1) Public cloud: Is available via the Internet for public use, and can be free or subscription pricing for individuals or organizations 2) Private cloud: Is a dedicated cloud for exclusive use by a specific organization or enterprise. It is sometimes called an enterprise cloud and can be on-premise or off-premise hosted by a third-party provider 3) Community cloud: Is shared by various organizations in support of a specific community and it can be either off-premise or on-premise 4) Hybrid cloud: Is a mix of the specified cloud models cited above, or the use of technologies selected for their cloud capabilities integrated into traditional data centres.

The inter-relationships and the necessary connections of the NIST cloud computing characteristics and models were specified by Jerry Bishop, the Chief Information Officer at Chippewa Valley Technical College in Wisconsin. These clearly show the five characteristics, the service models, and the deployment models and how they interrelate and work together in a model of cloud computing. These interrelationships with the characteristics, service and deployment models are shown in figure 1 below.


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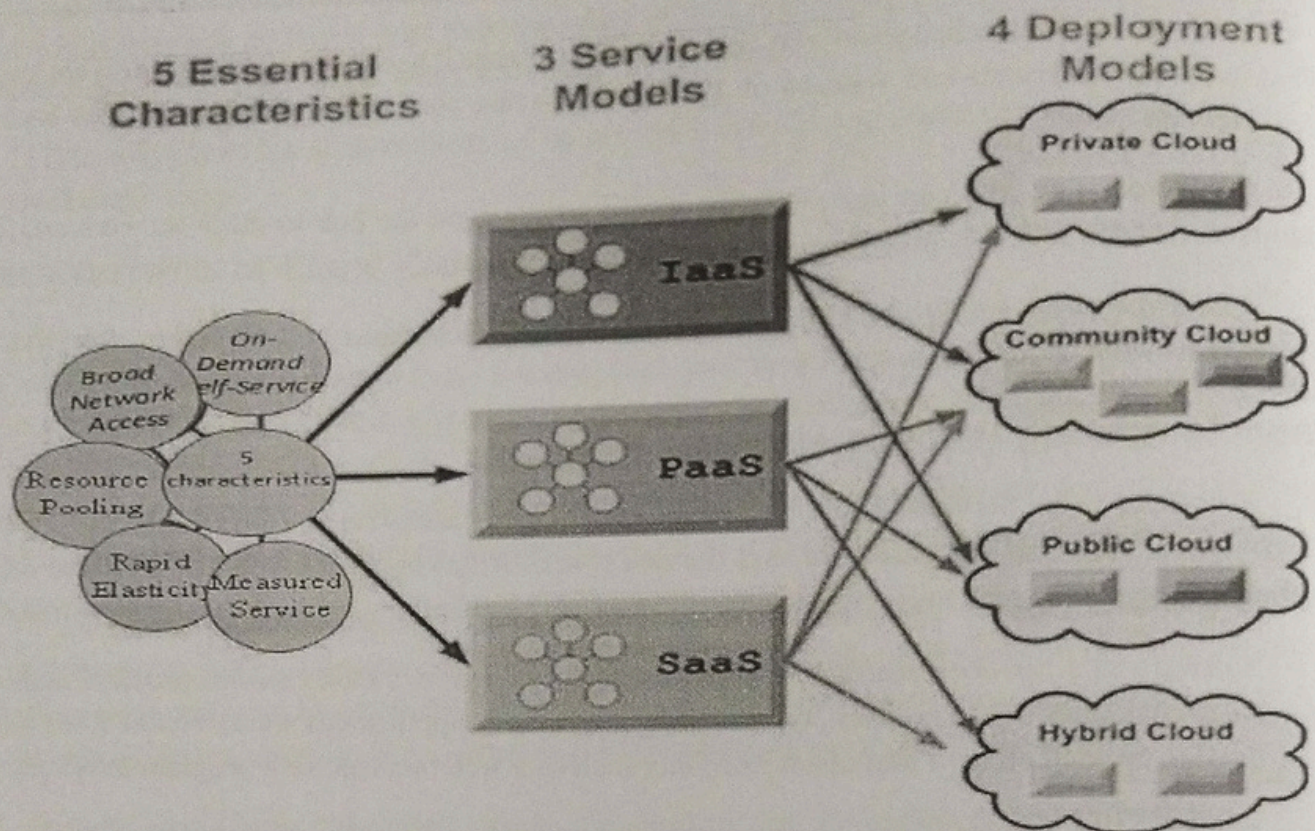


Figure 1: The interrelationships - characteristics, Service and Deployment Models

Risks of Cloud Computing in Education

There are clearly some major potential benefits to institutions deploying cloud services however; it challenges computing service personnel who may fear the consequences of their roles being outsourced. The universities and schools should consider the challenges and risks prior to transferring to the cloud. Examples of these risks are:

Cloud Service Failure: Insufficiency of financing and immature markets could guide some cloud providers out of business and any loss or deterioration of service delivery performance, as well as a loss of investment, make the universities and schools to the risk of having to perform their own duties and obligations, thus being exposed to contractual or legal liability to their employees, third parties, the students or even the public.

Data security: A major concern is around the security of data. Institutions may consider that their data is more secure if it is hosted within the institution. Transferring data to a third party for hosting in a remote data centre, not under the control of the institution and the location of which may not be known presents a risk. Strict data protection laws restrict the storage of personal data to certain countries with which agreements have been signed. Some cloud providers now provide guarantees in their contracts that personal data will only be stored in particular countries. The primary risk here is that there will be a breach of confidentiality which involves a student (or member of staff) suing the institution, leading to high costs and adverse publicity.

Privacy: The multi-tenancy, reuse of hardware and software profiles, and resiliency due to the

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redundant nature of cloud means a greater risk of incomplete or unlock deletion or denial of service attacks on institutions' confidential data.

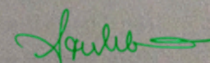
Assurance to Service Provider: This proposes a dependency on a particular cloud service provider for service preparation, especially when data portability is not supported.

Conclusion

The Present problem of our country reaching technology to remote schools and educational Institutes in imparting "equal and quality education to all" can be solved with mere small gadgets like ipad's, iphones, tabs thereby saving on purchase of computing infrastructure, licensing and purchase of software's and support personnel. In the era of "Big data" cloud computing has immense role in improving quality and enormous educational content available for students and research scholars. The success and high return on investment (ROI) of cloud infrastructure vests in the hands of bigger organizations and the public sector in particular. The success of cloud computing in education can be attributed to the acceptance of cloud computing by everyone in the field of education with good chunk of support by government. This paper presents educational cloud computing and how the universities and institutions are already taking advantage of it, not only in terms of cost but also efficiency security, reliability and portability. Several general examples of cloud computing in education such as Microsoft, Google App, IBM and others help to digitalize the education system and storing the data in cloud. As bandwidth increases globally and increasing numbers of students have adequate access to the Internet, many through mobile devices, they will become more comfortable with using rapidly evolving web-based applications and storing their data online rather than on their own storage devices which are more likely to be lost or corrupted. Demand for cloud applications may therefore be driven by users rather than by institutions.

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ROLE OF CLOUD COMPUTING IN BUSINESS DEVELOPMENT

– B. Santosh Kumar *

Abstract

The entire world focuses on the consumer marketing allegations of the hastily evolving convergence of dynamically scalable multi-client computational power, use of storage services and databases made obtainable through a network or the Internet. On the whole development is also known as "Cloud Computing". Public services linked with Cloud Computing grew from \$9 billion to \$40 billion over the last five years. This convergence is aggravated by the increased usage of e-Commerce, social media and smart phones and mobile commerce. This empirical impact study emphasizes the consequences of adopting Cloud Technology in business organizations (micro, Small Medium Businesses (SMBs) and Small Medium Enterprises (SMEs)) and how it affects business development, from various research literature

Keywords: consumer market, multi-client, convergence

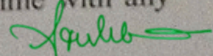
Introduction

Cloud computing is an enhanced technology to run businesses. Instead of running the applications on a PC or a LAN, they run on a shared multi-tenant. It is self-service oriented; to use any application that runs in the cloud, just logged in, customize it according to the customer need, and start using it. More Businesses are running all kinds of applications in the cloud nowadays, like CRM, accounting, HR, and custom-built applications. Cloud-based applications cost less, since the customer doesn't need to pay for all the hardware and software, facilities, or extensive configuration and maintenance of a full technology stack, to run them. Cloud provides more scalable, more reliable and more secure service. And over, upgrades are periodically completed by cloud providers to facilitate new features, security, performance enhancements automatically. Cloud technology follows pay-as-you go model. Finally, cloud applications and Adaptation of Cloud Technology, doesn't eat up the valuable IT resources of any company. And adopting Cloud, allows the customer to focus on deploying more applications, new projects, and innovation. Cloud computing is a modest idea, but it can have a huge impact on any business.

Characteristics of Cloud Technology

The characteristics of cloud technology are as follows

1. On-Demand Self Service: A customer can avail any contracted computing resource such as processing power, storage space, or application programs from a service provider without human interaction.
2. Broad Network Access: The computing resources can be accessed anywhere, anytime with any standard device which can access the web.



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3. **Resource Pooling:** The computing resources of a provider are assembled to provide the confined service. The pooled resources may be geographically spread across multiple data centers. The computing resources of a provider are shared by several customers. The resources are dynamically assigned to customers depending on the demand.
4. **Rapid Elasticity:** Computing resources may be availed elastically by customers. A customer may request more resources when needed and release them when not required. From a customer's point of view the resources are unlimited. The customer pays only for the total resources used.
5. **Measured Service:** Cloud computing systems are adaptive systems. They automatically balance loads and optimize the use of resources. A user is permitted to monitor and control resource usage, thereby providing transparency in bills.

Cloud Technology Service Models

There are three basic categories of cloud service models are used. They are as follows

1. **Software-as-a-Service (SaaS):** Instead of installing software on the client's machine and updating it with regular patches, frequent version upgrades etc., applications like Word processing, CRM (Customer Relationship Management), ERP (Enterprise Resource Planning) are made available (hosted) over the internet for the consumption of the end-user.
2. **Platform-as-a-Service (PaaS):** Instead of buying the software licenses for platforms like operating systems, databases and middleware, these platforms and the software development kits (SDKs) and tools (like Java, .NET, Python, Ruby on Rails) are made available over the Internet.
3. **Infrastructure-as-a-Service (IaaS):** This refers to the tangible physical devices (raw computing) like virtual computers, servers, storage devices, network transfer, which are physically located in one central place (data center) but they can be accessed and used over the internet using the login authentication systems and passwords from any dumb terminal or device.

Cloud Deployment Models

Cloud service deployment can be in any one of the following

1. **Public Cloud:** It is available from a third party service provider through the Internet and is very cost effective for SMBs to deploy IT solutions. For example, Google Apps.
2. **Private Cloud:** It is managed within an organization and is suitable for large enterprises (managed within the walls of the enterprises).
3. **Community Cloud:** It is used and controlled by a group of enterprises, which have shared interests.
4. **Hybrid Cloud:** It is a combination of public and private cloud.

Reasons for the emergence of Cloud Technology

Even though, there are numerous reasons for the emergence of Cloud Technology in the technical side, the major reasons for cloud emergence are

1. **Rapid growth of computer and communication technologies:** Technological growth in computing and computing devices, and in the data communication lead to the tremendous growth of cloud technology.

2. Changes in management philosophy: Decades ago, most of the organizations used to keep their data manual or stored their data in on premise infrastructure. But to meet the global competency, most of the organizations want to utilize their time to improve the business, and ready to outsource their IT requirement.
3. Availability of excess computing capacities with giant corporations such as Amazon and Google.

Advantages of Cloud Computing

Cloud computing provide more benefits to micro businesses, Small Medium Businesses (SMBs) and Small Medium Enterprises (SMEs). They are given below

Flexibility: Cloud-based services can rapidly meet the business demand of any organization by providing various services.

No Up-Front Cost: Cloud computing services are typically pay-as-you-go, so there's no need for upfront cost of infrastructure. Since cloud computing is much faster to deploy, businesses (SMEs) have marginal project start-up costs and expectable ongoing operating expenses.

Increased collaboration: Cloud computing upsurges collaboration by allowing all employees to synchronize up and work on documents and shared applications simultaneously from their own place. It even allows them to follow colleagues and records to receive critical updates in real time.

Automatic software updates: Cloud service providers do the server maintenance including software upgrades, security updates, freeing up their customers' time and resources for different other tasks.

Document control: If a company doesn't use the cloud, workers have to send files from side to side over email. This means only one person can work on a file at a time and the same document will be duplicated in millions of formats and names.

Security: Businesses storing everything in the cloud, can access the data even anything happened to the machine.

Work from anywhere: Cloud computing allows employees to work from anywhere. This elasticity positively affects knowledge workers' work-life balance and productivity.

Environmentally friendly: Businesses adopting cloud computing uses only the server space they needed, so it decreases their carbon footprint and saves the environment.

Disaster recovery: When companies start trusting on cloud-based services, they need not have to device complex disaster recovery plans, because cloud service providers take care of most issues in a very fast manner.

Competitiveness: The cloud technologies grant SMEs access to enterprise-class technology by providing various ERP solutions. It also allows small and medium businesses to act faster than established, big competitors.

Limitations of Cloud Technology

Even cloud technology has several advantages, the organization adopting cloud has to keep aware of following limitations.

1. Failure of communication will cut off a cloud service.
2. Sending data on a publicly accessible communication system have the danger of eavesdroppers tapping the communication line and stealing or corrupting data or stealing it from disk storage.

3. Deterioration of the quality of service of a cloud provider or a provider ceasing operations due to bankruptcy.
4. Complex legal problems may arise if providers' servers are in a foreign country and an organization's program and data are corrupted or stolen. An organization must clarify what laws apply while signing the Service Level Agreement with a cloud services provider.
5. A recent problem is the clandestine surveillance of data traffic on the Internet by the intelligence agencies of UK and USA. As cloud providers' infrastructure is spread throughout the world, so it may not be wise to use those services, particularly if the data to be processed or the program is sensitive.

Impact study of adopting Cloud Technology in Business Organization

There are some major consequences of adopting cloud in Business. They are Ease of use and convenience, Cost reduction, Reliability, Security and privacy, and Sharing and collaboration. The literature support of these impacts is summarized below.

1. Ease of use and convenience: Small business employees often work outside the actual office location and hence having easy access to their data (using their mobile devices) is a big plus. This need for employees to have access from remote locations as well as the increasing number of online transactions necessitates a cloud computing solution. Accounting and finance work has been outsourced to the cloud, leaving more time for small business executives squander on strategic work and initiatives. Accountants are using cloud technologies for their SMEs clients for a convenient monthly fee. The Cloud approach helps eliminate administrative overhead and permits access from any geographical location, any device, and from any organization. Less powerful devices (smartphones, netbooks) are able to make the most of the company's backend IT systems via a simple web-based interface like AWS Management console.
2. Cost reduction: Due to the subscription model, there is a huge cost savings for small firms. The access cost for small firms utilizing business analytics and intelligence, which needs lots of computing power consumption, has been lowered. A 70% cost reduction has been observed since adopting AWS (Amazon Web Services) as the cloud vendor. AWS has also reduced their prices a couple of times, in the past three years, in spite of the absence of competitive forces. European SMEs, who are more risk averse, compared to USA SMEs, appreciate this reduction of fixed IT assets cost as well reduction of maintenance costs of IT assets, resulting in lowering the entry barrier. Due to the per user revenue model, small businesses could afford enterprise applications like CRM (Customer Relationship Management) or SCM (Supply Chain Management) tool and Computing power is nowadays considered as an article of trade, due to the entry of various players, providing it at an inexpensive cost. Small businesses and startups can now afford applications such as ERP (Enterprise Resource Planning), CRM (Customer Relationship Management), SFA (Sales Force Automation) and SCM (Supply Chain Management) due to economical subscription fees. Immediate access to hardware and software resources is available with no upfront capital investments resulting in faster time to market, with IT become an operational expense (instead of capital expense). Adoption of IaaS reduces capital expenses and IT costs. Elasticity in ramping up (scalable infrastructure) and disposing of cloud capacity when not needed, is extremely budget friendly. For risky business models, if the demand rises piercingly in ad-hoc manner, scalability of resources provided by Cloud service providers (operational excellence) becomes a huge competitive advantage. *For risky business models, if the demand rises piercingly in ad-hoc manner, scalability of resources provided by Cloud service providers (operational excellence) becomes a huge competitive advantage.*
3. Reliability: Since the cloud is available round the clock, it is more reliable. Employees can even call

- up the cloud center (if needed) instead of depending on the in-house IT staff. Data redundancy is built-in by cloud storage solutions so that the files are always obtainable, even in times of network downtime, power failures, etc. This built-in redundancy helped Netflix to stay buoyant online, regardless of AWS failure in 2011. Even in 2010, Gmail had an uptime of
4. 984%, which is 32 times more reliable than a typical widely used email system. On the contrary, for SMEs, the reliability of cloud services is definitely important, but not as crucial as for large companies. Sultan adds that portability of end-user data to another cloud provider (in case of failure of the primary provider) is extremely important. Lack of interoperability is an issue prevailing across the cloud computing landscape. Also, reliability gets impacted because of the downtime of various commercial cloud solutions like Salesforce.com, Amazon, Gmail and Google Docs, resulting in setting up of failsafe cloud systems. Needed reliability level has to be observed in spite of low prices of cloud services. In it is further stated that quick phone support is needed under SLAs by commercial enterprises providing automatic disaster recovery and back up provides confidence. Efforts are underway by the FTC (Federal Trade Commission) and the Cloud Security Alliance to improve the reliability of these cloud providers .
 5. Security and Privacy: Organizations talking about cloud security are actually more concerned about having their own control (something like a private cloud) than any other serious issue. Cloud security is good, as risks get minimized due to authentication and encryption. Security is heightened by, for example, monitoring activities, tracking transactions, providing selective access to users, and utilizing strong password. In it is reported that 75% of the CIOs reporting are concerned about cloud security and argues that Google does not encrypt data on their servers . On the other hand, in also stated that 66% of USB drives are lost; hence the cloud is more secure. Installation of security patches can be avoided in this manner day and months are saved. There may be some elasticity depending on the cloud solution chosen; for example, Google Apps allows certain users to stipulate the location of data storage to meet the Federal guidelines. Improved security is possible due to economies of scale as well as affordability of excellent security experts. Even if data security is the main issue for SMBs, they still utilize public clouds, because a public cloud provides standard services at reasonable cost.
 6. Sharing and collaboration: With the proliferation of social media and smart phones (mobile devices), startups and small companies have improved collaboration within their companies. Cloud file storage allows various SMBs stakeholders to share information and data (via emails, shared web-links, IM-instant messengers), store and retrieve information with each other. Google Apps, box and Jive are very good examples of sharing content and collaboration among stakeholders. Large data are being shared and collaboration with other CSE (Computational Science and Engineering) research groups is enabled. Collaboration becomes easier with IMs (instant messaging) and video conferencing, enabled via the cloud. Document sharing and editing of the same document by several people at the same time (via Google Docs) and collaboration (via Skype, Google chat) is compelling for users to adopt cloud computing.

Conclusion

Cloud computing is definitely making effect with micro as well as SMBs or SMEs and is slowly sneaking into their business strategy formulation and accomplishment now and in the near future. SMEs or SMBs are not diffident to integrate cloud into their business strategy in-spite of the few concerns being cited by industry specialists. As per this research review, the convenience and ease of use is the impact cited by SMEs to espouse cloud. The second impact to use and support Cloud Technology is privacy and improved security. The third impact for practicing and taking up of cloud is cost reduction. This means

that SMBs or SMEs find the cloud easy to use, convenient, sufficiently secured for their business, their business privacy is well protected and lastly but not the least is that the Cloud helps SMEs to depose their cost in a significant way. The fourth impact, reliability is not an important factor for SMEs to adopt and use cloud technology. SMEs are concerned about cloud downtime and rely more on their physical devices within their physical proximity for backup, storage etc. The fifth and the last impact is sharing and collaboration which indicates that SMEs have a higher need for sharing and collaboration, instead of preferring face to face meetings, phone calls, business travel, possessing physical devices etc. for their business needs, can go for cloud, since cloud provides the same effect in less cost. The study perceived that adoption of Cloud Technology has positive impact on business development.

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CONTENTS

KEYNOTE ADDRESS: DEMONETIZATION - ECONOMIC FACTS <i>Prof.R.Nageshwar Rao, Dean, Faculty of Management, Osmania University</i>	1
DIGITAL PAYMENTS IN EDUCATIONAL INSTITUTIONS <i>Anudeep Aurora Nimmatoori, Vice Chairman, Aurora Group</i>	5
CASHLESS ECONOMY: THE WAY FORWARD <i>Dr.M.Madhavi, Director, Aurora's PG College, Ramanthapur</i>	8
DIGITAL TRANSACTIONS-THE ROAD AHEAD IN INDIAN RETAIL INDUSTRY <i>Dr.D.Harrison Sunil, Professor, University of Ethiopia</i>	14
ROLE OF INDIA POST PAYMENTS BANK LTD INFINANCIAL INCLUSION-A CASE STUDY <i>Dr.Chandra Sekhar Pattnaik, Professor, Megha & Omega Group of Institutions, Hyderabad</i> <i>Dr.Suman Kalyan Chaudhury, Professor, Dept of Business Administration, Berhampur University, Odisha</i>	17
PRAGMATIC SHIFTING OF INDIAN ECONOMY INTO CASHLESS ECONOMY <i>B.MadhuSudhan Naik, Research Scholar, School of Commerce & Mgt, Dravidian University, Kuppam..</i> <i>Dr.G.R.Swetha, ICSSR, Post Doctoral Fellow, School of Commerce & Mgt, Dravidian University, Kuppam.</i> <i>Prof.G.L.Narayanappa, Dean, School of Commerce & Mgt, Dravidian University, Kuppam</i>	22
DYNAMICS OF DIGITAL BANKING:A KEY TO CASHLESS ECONOMY <i>Prof.P.Venkateswarlu, Professor of Finance & Banking, Dept of Commerce & Mgt Studies, AU</i>	24
CASH LESS ECONOMY – A STUDY ON PROBLEMS AND PROSPECTS ON FORMAL AND INFORMAL SECTOR <i>Dr. Vandana Samba, Professor & Principal, Vidya Dayini College of IT & Mgt, Hyderabad</i>	28
DEMONETIZATION POLICY: IMPACT ON INDIAN ECONOMY <i>Dr.Raavi Radhika, Associate Professor, Hyderabad Business School,GITAM University</i>	31
CASHLESS SOCIETY – AN INDIAN VOYAGE <i>Dr. E Jalaja, Professor, Avanthi PG College, Hyderabad</i>	39
IMPACT OF DIGITAL MARKETING ON INDIAN ECONOMY <i>P.Harika, HOD, Dept. of Management, Aurora's PG College, Uppal</i> <i>Dr.N.Hemalatha, Director, Aurora's PG College, Uppal</i>	42
DIGITALIZATION: A BOON TO CASHLESSTRANSACTIIONS IN INDIA <i>Devi Bhavani Nair, Associate Professor, Avanthi PG College, Hyderabad.</i> <i>Dr N. Thirupalu, Professor, Department of Management, Aurora's PG College, Ramanthapur</i>	47
IMPACT OF CASHLESS ECONOMY(A DOUBLE EDGE SWORD) <i>Dr.G.Vijaya Sree, Professor, Aurora's PG College, Moosarambagh</i>	50
DEMONITIZATION EFFECT ON BANKING SECTOR <i>Dr.D.Madan Mohan, Professor, Indur PG College, Bodhan</i> <i>Ch.Swathi, Research Scholar, Osmania University</i>	53
ENCOURAGING DIGITAL TRANSACTIONS IN RETAIL SECTOR <i>Dr.G.Lavanya, Andhra Mahila Sabha Arts & Science College for Women, OU</i>	57

CASHLESS ECONOMY- FUTURE INDIA <i>Dr.B.Bhavani, Visiting Faculty, IIAM, Vishakapatnam</i>	60
A STUDY ON CASHLESS TRANSACTIONS via Paytm ON PANSHOPS IN VISAKHAPATNAM <i>Dr.P.V.Mohini, Associate Professor, Gayatri Vidya Parishad College for PG & Degree Course.</i> <i>Dr. N.VijayaJyothi, Associate Professor, Gayatri Vidya Parishad College for PG & Degree Course.</i>	63
IMPACT OF DEMONETISATION ON DIGITALISATION OF INDIAN ECONOMY <i>Dr. Mohd. Ashraf Ali, Professor, Department of Commerce, Aligarh Muslim University</i> <i>Dr.N.Thirupalu, Professor, Department of Management, Aurora's PG College, Ramanthapur</i> <i>Dr.Furquan Uddin, Post Doctoral Fellow, Department of Commerce, Aligarh Muslim University</i>	68
WHITHER CASHLESS ECONOMY? <i>Dr.G.Sreenivas Reddy, Former Registrar, Kakatiya University, Warangal</i> <i>Dr.Raghu Naga Prabhakar, Director, Aurora's Business School, Hyderabad</i>	71
ENCOURAGING DIGITAL TRANSACTIONS IN SMALL SCALE AND TINY INDUSTRIES <i>Dr. D.Shireesha, HOD, Department of Management, Aurora's PG College, Moosarambagh</i>	75
SNAPSHOT OF DEMONITIZATION IN THE MAKING OF DIGITAL INDIA <i>Dr. Neetu Sachdeva, Professor, Aurora's PG College, Moosarambagh</i>	77
ELECTRONIC PAYMENT SYSTEM - CASHLESS ECONOMY IN BANKING SECTOR <i>Dr. Pradosh Chandra Patnaik, HOD, Dept of CSE, ASTRA</i>	81
INDIA - A CASH LESS ECONOMY AN UNREALSTIC DESIRE <i>Dr. P.Rajavardhan Reddy, Professor, Aurora's PG College, Moosarambagh</i>	85
ISSUES AND CHALLENGES OF INDIA AS A CASHLESS ECONOMY <i>T.V. Ratnavali, Associate Professor, Aurora's PG College, Moosarambagh</i>	90
NOTEBANDI - IMPACT ON INFORMAL SECTOR: A MICRO LEVEL STUDY <i>Dr. G. Venkat Krishna Reddy, Professor, Aurora's PG College, Ramanthapur</i> <i>Dr.G.V.Prabhakar, Professor, Departement of Management, Aurora's PG College, Ramanthapur</i>	93
LIVING WITHOUT MONEY: SIGNIFICANCE OF CASHLESS TRANSACTIONS IN DIGITAL SOCIETY <i>Satish Kumar Chukariya, HOD, Department of Management, Aurora's PG College, Ramanthapur</i>	102
EFFECTIVENESS OF DIGITAL SIGNATURES IN ELECTRONIC BUSINESS <i>E. Devender Rao, HOD, Department of Computer Applications, Aurora's PG College, Ramanthapur</i>	106
DEMONETIZATION: EFFECT AND IMPACT ON INDIAN ECONOMY <i>Ajatashatru Samal, Research Scholar, Rayalaseema University, Kurnool</i> <i>Rajeshwari G.V, Assistant Professor, Dept of Mgt Studies, Nagarjuna College of Engineering & Tech.</i>	111
EMERGING TRENDS IN THE CASHLESS ECONOMY – THE NEED OF THE HOUR <i>G.K.Patnaik Karakavalsa, Research Scholar, Dept of HRM, AU, Vishakapatnam</i>	116
MOBILE COMMERCE RINGS INTO NEW ERA <i>P.Shirisha, Research Scholar, Osmania University</i>	121
A STUDY ON PROMOTION OF DIGITAL LITERACY AMONG HOUSEHOLDS –MOVING TOWARDS INDIA'S DIGITAL REVOLUTION <i>P.Hima Jagathi, Associate Professor, Department of Management, Aurora's PG College, Ramanthapur</i> <i>Prof. S. Rajani, Director, Department of Management, Gayathri Vidya Parishad</i>	124

CASHLESS ECONOMY - PERSPECTIVES <i>Mrs.Saujanya.S.Variganj, Softskill Trainer, Gayatri Vidya Parishad, Vishakapatnam</i>	128
THE IMPACT AND CHALLENGES OF CASHLESS SOCIETY <i>M. Subhashini, Associate Professor, Department of Management, Aurora's PG College, Ramanthapur</i>	133
ROLE OF VARIOUS INSTITUTIONS IN PROMOTING DIGITAL LITERACY <i>G. Vijaya Sudha, Incharge Principal, Aurora's Legal Sciences Institute, Nalgonda</i>	138
CASH TO CASHLESS SOCIETY:ITS IMPLICATIONS ON BANKING <i>B.S.S.Charan, Research Scholar, University of Hyderabad</i>	140
ROAD TO CASHLESS ECONOMY: CREDIT CARDS <i>Nallabelli Radhika Associate Professor, Department of Management, Aurora's PG College, Ramanthapur</i> <i>D.Rani, Assistant Professor, Department of Management, Aurora's PG College, Ramanthapur</i> <i>R.Akhilesh, Assistant Professor, Department of Management, Aurora's PG College, Ramanthapur</i>	142
IMPACT OF DEMONETISATION ON DIGITAL PAYMENTS A MEASURE HEADING TOWARDS CASHLESS SOCIETY <i>K.V.Nagaraj, Head of Department, Management Studies, Aditya Degree College, Vishakapatnam</i>	144
THE EFFECTS OF CASHLESS TRANSACTION SYSTEM IN INDIA <i>Sanjay Kumar P, Associate Professor, Department of Management, Aurora's PG College, Ramanthapur</i>	148
UNDERSTANDING CONSUMER ATTITUDES ON DIGITAL AND MOBILE WALLETS <i>Preeti Jaiswal, Associate Professor, Department of Management, Aurora's PG College, Ramanthapur</i> <i>P.Sridevi, Assistant Professor, Department of Management, Aurora's PG College, Ramanthapur</i> <i>B.Dhanalakshmi, Assistant Professor, Department of Management, Aurora's PG College, Ramanthapur</i>	152
CASH LESS SOCIETY: VISION OF DIGITAL INDIA <i>P.Arputha, HOD, Dept of Computer Applications, Aurora's PG College, Moosarambagh</i>	155
DEMONETIZATION PAVING WAY TO DIGITAL ECONOMY <i>S. Pratibha, Associate Professor, Department of Management, Aurora's PG College, Ramanthapur</i> <i>B. Madhu Bala, Associate Professor, Department of Management, Aurora's PG College, Ramanthapur</i> <i>V. Babitha, Assistant Professor, Department of Management, Aurora's PG College, Ramanthapur</i> <i>H. Ananth Karthik, Assistant Professor, Department of Management, Aurora's PG College, Ramanthapur</i>	159
CASHLESS ECONOMY: EPITOMIZING THE ROLE OF VARIOUS INSTITUTIONS IN PROMOTING DIGITAL LITERACY <i>R.Sushma Chowdary, Associate Professor, Department of Management, Aurora's PG College, Ramanthapur</i> <i>S.Radhika, Assistant Professor, Department of Management, Aurora's PG College, Ramanthapur</i> <i>Sd.Noorullah, Assistant Professor, Department of Management, Aurora's PG College, Ramanthapur</i>	163
GOING CASHLESS: POSSIBILITY FOR INDIA <i>D.Pavan Kumar, Sr.Assistant Professor, Department of Management, Aurora's PG College, Ramanthapur</i>	167
ROLE OF DIGITIZATION IN INDIAN ECONOMIC GROWTH: AN EMPLOYMENT PERSPECTIVE <i>B.V.N. Prashant, Program Manager, Strategic Accounts, Tech Mahindra Ltd</i>	170
DIGITAL INDIA - AN EMPOWERED SOCIETY <i>L.V.Sandhya Bala, Sr.Assistant Professor, Department of Management, Aurora's PG College, Ramanthapur</i>	175
DEMONETIZATION- TRANSFORMING INDIA INTO DIGITAL ECONOMY <i>K.Deepika, VIPS College, Andhra University, Vishakapatnam</i>	179

IMPACT OF DEMONETIZATION ON INDIAN ECONOMY

D.Naga Shrivya, Associate Professor, Department of Management, Aurora's PG College, Ramanthapur 183

DEMONETISATION – A GATEWAY TO DIGITAL ECONOMY

M. Suvarchala Rani¹, Research Scholar, Hyderabad Business School, GITAM University, 187
A.V.B.N.H. Saroja², Research Scholar, Hyderabad Business School, GITAM University

MAKING TOWARDS A CASHLESS ECONOMY: OPPORTUNITIES AND CHALLENGES FOR INDIA

A.K.Ashwini, Assistant Professor, Department of Management, Aurora's PG College, Ramanthapur 191
M.Rajesh, Assistant Professor, Department of Management, Aurora's PG College, Ramanthapur
R.Nagesh, Assistant Professor, Department of Management, Aurora's PG College, Ramanthapur

EASE OF DOING DIGITAL TRANSACTIONS WITH REFERENCE TO RETAIL SECTOR

Malathi Devi Parne, Assistant Professor, Department of Management, Aurora's PG College, Ramanthapur 194
P.Dixith, Assistant Professor, Aurora's PG College, Ramanthapur
M.Eashwar Rao, Assistant Professor, Department of Management, Aurora's PG College, Ramanthapur

CASHLESS ECONOMY: SOURCES AND WAYS TO CREATE AWARENESS ABOUT CASHLESS TRANSACTIONS

K.Ramu, Associate Professor, Mother Teresa PG College, Ghatkesar 199
T.Venkateswarlu, Assistant Professor, Mother Teresa PG College, Ghatkesar

PILLARS OF DIGITAL INDIA

V.Harika, Assistant Professor, Department of Management, Aurora's PG College, Ramanthapur 202
S.Sandhya, Sr.Assistant Professor, Department of Management, Aurora's PG College, Ramanthapur

IMPACT OF DEMONETIZATION ON INDIAN ECONOMY

Kumari Shalini, Assistant Professor, Aurora's Degree & PG College, Chikkadpally. 206

DIGITAL LITERACY: THE NEED OF THE HOUR IN POST-DEMONETISATION ERA

S.Pushpalatha, Sr.Assistant Professor, Aurora's PG College, Ramanthapur 208
B.Sreelatha, Assistant Professor, Department of Management, Aurora's PG College, Ramanthapur
Dr.R.Padmaja, Assistant Professor, Krishna University

NEED FOR CASHLESS ECONOMY IN INDIA

P.Indu, Assistant Professor, Aurora's PG College, Ramanthapur 212

DEMONETISATION AND ITS IMPACT ON SOCIAL DEVELOPMENT: WITH REFERENCE TO AGRICULTURE, BANKING AND EDUCATION SECTORS

Nagachandra Rao. Chirunomula, Faculty of Management, Vishwa Vishwani Group of Institutions 214
Swathi Kalwala, Faculty of Management, Vishwa Vishwani Group of Institutions

MAKING INDIA A CASHLESS ECONOMY

S.Rajyalakshmi, Assistant Professor, Aurora's PG College, Moosarambagh 217

EFFECT OF PLASTIC MONEY ON BANKING SECTOR

S.Maheshwari, Assistant Professor, Aurora's PG College, Ramanthapur 221

D.Jayalakshmi, Assistant Professor, Department of Management, Aurora's PG College, Ramanthapur

ROLE OF BANKS IN CASHLESS ECONOMY

K.Shailaja, Associate Professor, Aurora's PG College, Moosarambagh 225

THE HUMAN ATM-THE DAILY BANKER

S. Lakshminarayana, Assistant Professor, AIMSHE, Peenya, Bangalore 228

CASHLESS PAYMENT SYSTEM IN INDIA

231

*SMD.Azash, Research Scholar, Rayalaseema University
Dr.N.Thirupalu, Professor, Department of Management, Aurora's PG College, Ramanthapur*

PAPER FREE PAYMENT SYSTEMS IN INDIA <i>T.Shyam Sunder, Assistant Professor, Aurora's PG College, Ramanthapur</i>	236
--	-----

TRANSITION FROM CASH BASED ECONOMY TO CASHLESS ECONOMY WITH AN EMPHASIS ON E-BANKING <i>K.Divya, Equity Advisor, Kavy Stock Broking S.Vani, Scholar, Dept of Commerce & Mgt Studies, Andhra University</i>	241
--	-----

VISIONS OF DIGITAL INDIA <i>K. Shilpa, Assistant Professor, Aurora's PG College, Ramanthapur</i>	246
--	-----

IMPACT OF DEMONETIZATION ON SMALL AND MEDIUM SCALE ENTERPRISE <i>N.Bhavani, Assistant Professor, Aurora's PG College, Ramanthapur S.Sandhya, Sr.Assistant Professor, Department of Management, Aurora's PG College, Ramanthapur R.Radhika, Assistant Professor, Department of Management, Aurora's PG College, Ramanthapur</i>	248
--	-----

A STUDY ON BENEFITS AND DRAWBACKS DIGITAL PAYMENTS IN OUR ECONOMY <i>P.Durga Prasad, Research Scholar, DCMS, Andhra University</i>	252
--	-----

IMPACT OF DEMONETIZATION IN INDIA <i>R.Radhika, Assistant Professor, Aurora's PG College, Ramanthapur</i>	254
---	-----

DEMONETIZATION AND ITS IMPACT ON INDIAN ECONOMY <i>Radhika Dubbaka, Assistant Professor, Aurora's PG College, Ramanthapur</i>	256
---	-----

IMPACT OF DEMONETIZATION ON RURAL INDIA <i>P.Saritha, Associate Professor, Aurora's PG College, Ramanthapur M.Subhashini, Associate Professor, Aurora's PG College, Ramanthapur</i>	262
---	-----

CASHLESS ECONOMY - BOON OR BANE <i>B.S.Anuradha, Assistant Professor, Department of Management Studies, AIMS Institute of Higher Education B.Megha, Assistant Professor, Department of Management Studies, AIMS Institute of Higher Education</i>	264
---	-----

BENEFITS AND CHALLENGES OF CASHLESS ECONOMY IN INDIA <i>Somaiah Pathakoti, Assistant Librarian, Aurora's PG College, Ramanthapur</i>	268
--	-----

CAN INDIA GO CASHLESS? <i>P. Sravanthi, MBA-IV Semester, Aurora's PG College, Ramanthapur</i>	272
---	-----

A STUDY ON IN-STORE DIGITIZATION TECHNIQUES IN ORGANIZED RETAILING SECTOR <i>B. Mohan Kumar, Director, Aurora's PG College, Moosarambagh</i>	276
--	-----

DIGITAL INDIA AND ITS IMPACT: VARIOUS PERSPECTIVES <i>Nomula Anjali, Associate Professor, Aurora's PG College, Moosarambagh</i>	279
---	-----

DIGITAL AND CASHLESS ECONOMY: AN INDIAN PERSPECTIVE <i>G.Vandana, Assistant Professor Aurora's PG College, Uppal B.DivyaVani, Assistant Professor Aurora's PG College, Uppal</i>	284
--	-----

ISSUES AND CHALLENGES IN CASHLESS ECONOMY <i>Dr. Saurabh Srivastava, Associate Professor, Faculty Coordinator, AIMS, Bangalore</i>	287
--	-----

ROLE OF INFORMATION TECHNOLOGY IN CASHLESS ECONOMY <i>Dr. Jayasheela, Professor & Dean(R&D) Aurora's PG College, Uppal</i>	291
A STUDY OF MULTINATIONAL FINANCIAL POLICIES: CASE OF ADDIDAS GROUP <i>D.Naga Shravya, Assistant Professor, Department of Management, Aurora's PG College, Ramanthapur</i> <i>K.Vishnu, Assistant Professor, Department of Management, Aurora's PG College, Ramanthapur</i> <i>Siddappa, Assistant Professor, Department of Management, Aurora's PG College, Ramanthapur</i>	295
ROLE OF DIGITALIZATION AND E-COMMERCE IN INDIAN ECONOMIC GROWTH: AN EMPLOYMENT GENERATION PERSPECTIVE <i>V.Harika, Assistant Professor, Department of Management, Aurora's PG College, Ramanthapur</i> <i>P.Preethi, Assistant Professor, Department of Management, Aurora's PG College, Ramanthapur</i> <i>P.Indhu, Assistant Professor, Department of Management, Aurora's PG College, Ramanthapur</i>	299
BLUE PRINT TO DIGITAL ECONOMY <i>M.Mounika, Assistant Professor, Department of Management, Aurora's PG College, Ramanthapur</i> <i>J.Raju, Assistant Professor, Department of Management, Aurora's PG College, Ramanthapur</i> <i>K.Satish Babu, Associate Professor, Department of Management, Aurora's PG College, Ramanthapur</i>	303
WORKING PAPER: DIGITAL ECONOMY – FACTS AND FIGURES <i>T.Shyam Sunder, Assistant Professor, Department of Management, Aurora's PG College, Ramanthapur</i> <i>A.Jyothi Rao, Assistant Professor, Department of Management, Aurora's PG College, Ramanthapur</i> <i>R.Akhilesh, Assistant Professor, Department of Management, Aurora's PG College, Ramanthapur</i>	308
BUSINESS INFORMATION LITERACY INSTRUCTION: A SURVEY AND PROGRESS REPORT <i>R.Uday Kiran Reddy, Assistant Professor, Department of Management, Aurora's PG College, Ramanthapur</i> <i>K.Nikhil, Assistant Professor, Department of Management, Aurora's PG College, Ramanthapur</i> <i>B.Sai Ram, Assistant Professor, Department of Management, Aurora's PG College, Ramanthapur</i>	312

IMPACT OF DIGITAL MARKETING ON INDIAN ECONOMY

P. Harika¹, Dr. N. Hemalatha²

Abstract – Digital Marketing talks about online marketing and the technology of digital media and its impact on business. Digital marketing is more about E-Commerce and interest of learning the web Technology implementing the strategies to develop the Indian economy. Digital marketing providing lots of job opportunities providing certified courses. The main objective is to be a SMART (Specific, Measurable, Achievable, Relevant, Time related) economy. In India rising technology demand for digital marketers is rising. The digital marketing mainly focuses on smooth implementation of e-governance in the country. In this article we will know about the pillars of digitalization and the Indian market improves the economic status of India. The use of digital marketing in the digital era not only allows for brands to market their products and services but also allows for online customer support through 24/7 services to make customer feel supported and valued. The use of social media interaction allows brands to receive both positive and negative feedback from their customers as well as determining which media platforms work well for them and has become an increased advantage for brands and businesses. Online marketing efforts, digital marketing allows marketers to see accurate results in real time. Digital marketing, it often feel like you're able to see results much faster than you might with offline marketing due to the fact it's easier to measure ROI. However, it ultimately depends entirely on the scale and effectiveness of your digital marketing strategy.

Key words: Digital Marketing, ROI, policies, opportunities, E-Governance.

Introduction

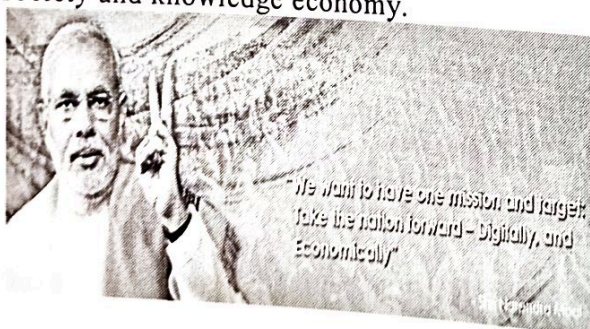
The journey towards a digitally – connected India began in the early 90s and 2000s with the introduction of a range of e – governance programmes. However, its impact was limited.

With a clear vision, the present government is pushing ahead the Digital India initiative to transform the country into a digitally empowered society and a knowledge economy. With the launch of this initiative, the government aims to reach out to citizens in the remotest of locations and make them a part of India's growth story. Since technology is a key driver in causing disruptive change, digital tools will empower citizens and prove to be a game-changer.

Digital India provides the much-needed thrust to the nine pillars of growth areas, namely Broadband Highways, Universal Access to Mobile Connectivity and Public Internet Access Programme, among others.

Vision of Digital India

The vision of Digital India programme is to transform India into a digitally empowered society and knowledge economy.



The Digital India programme is centred on three key vision areas:

Digital Infrastructure as a Core Utility to Every Citizen

Governance and Services on Demand

• Digital Empowerment of Citizens

The Digital India vision provides the intensified impetus for further momentum and progress for e-Governance and would promote inclusive growth that covers electronic services, products, devices, manufacturing and job opportunities.

• Governance and Services on demand

Digital India aims to create a seamless ecosystem across multiple government departments to make services available on both online and mobile platforms. As part of the initiative, financial transactions would be made cashless and entitlements would be available on the cloud.¹²

• Digital empowerment of citizens

This programme will provide universal digital literacy to enable citizens to use the digital platform. The government services can be accessed in local languages to help users participate in the new governance mechanism. Since technology is the key driver in India's economic growth, it will spur growth in areas of governance and service delivery.

Successes of Digital India

• E-Pathshala: Transforming Learning through Technology

The Ministry of Human Resource Development introduced the e-Pathshala programme to promote

'learning on the go' among students, teachers and parents. Through this initiative, free access to NCERT books is available to students of classes 1 to 12. These books are available in both Hindi and English.¹⁴

- **eBiz platform**

The initiative, driven by the Department of Industrial Policy and Promotion (DIPP), seeks to provide comprehensive Government-to-Business (G2B) services to business entities with transparency, speed, and certainty. The aim is to reduce several levels of points of contact between business entities and government agencies, establish single-window services and reduce the burden of compliances.¹⁵

- **My Gov platform**

This is a platform for citizens to exchange ideas and suggestions with the government. Through this initiative, the government receives feedback, inputs and ideas from people regarding policy decisions and new initiatives like Digital India, Swachh Bharat, Make in India, among others.¹⁶

- **Jeevan Praman**

The Jeevan Praman programme enables pensioners to conveniently submit their life certificates online through this portal. The certificates are stored in the Life Certificate Repository and available to pensioners and Pension Disbursing agencies.¹⁷

- **Digital Locker System**

DigiLocker is a key initiative under Digital India. This programme is targeted at paperless governance and is a platform for issuance and verification of documents and certificates digitally. A dedicated cloud storage space is given to all those who register for the Digital Locker account. To make it an easy process, this storage is linked to their Aadhar (UIDAI) number. Organisations that are registered with Digital Locker can push electronic copies of documents and certificates (e.g. driving license, Voter ID, School certificates) directly into the citizens' lockers. As per the official website, there are 39, 64, 008 registered users and 50,47,204 uploaded documents.¹⁸

Digital India has been introduced to ensure smooth implementation of e – governance in the country and transform the entire ecosystem of public services through the use of information technology. There is no better way to promote inclusive growth other than through the empowerment of citizens.

Key Pillars

The Digital India programme is based on the following pillars:

Broadband Highways²

Under this programme, high – speed broadband coverage highways will connect 250,000 villages,

various government departments, universities, etc. In addition, National Information Infrastructure (NII) will ensure the integration of the network and cloud infrastructure within the country to provide high-speed connectivity to various government departments. These components include networks such as State Wide Area Network (SWAN), National Knowledge Network (NKN), National Optical Fibre Network (NOFN), Government User Network (GUN) and the MeghRaj Cloud.

- **Universal access to Mobile Connectivity³**

Today, there exist around 55,619 villages in India that have no mobile coverage. To cover remote villages in the northeast, a comprehensive development plan has been initiated that will be carried out in phases.

- **Public Internet Access Programme⁴**

The underlying principle of this initiative is to make 250,000 Common Service Centres (CSCs) operational at the gram Panchayat level for delivery of government services. In a similar move, 150,000 post offices will be converted into multi-service centers.

- **E-governance: Reforming government through technology⁵**

The idea is to use business process re-engineering to transform government processes and make them simple, automated and efficient. Under this, forms will be simplified and only minimum and necessary information will be collected. Similarly, there will be a tracking process for the status of online applications. To further simplify the process, use of online repositories for certificates, educational degrees, identity documents will be encouraged so that these documents do not have to be submitted in the physical form.

- **Ekranti - Electronic Delivery of Services⁶**

This pillar emphasizes on the use of technology for service delivery such as e-education, e-healthcare, technology for planning, final inclusion etc.

- **Information for all⁷**

This is to provide open access to government information and documents available online. This will enable a two – way communication between the citizens and the government through online platforms and social media. The biggest success story is MyGov.in, a platform for citizen engagement in governance, which was launched by the Prime Minister Narendra Modi on 26th July 2014 as a medium to exchange ideas or suggestions with the government.

- **Electronics manufacturing⁸**

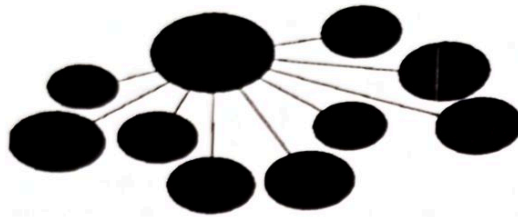
Under this programme, the target is to reach net zero imports by 2020 through implementation in areas such as taxation, economies of scale, skill development, government procurement etc.

• IT for jobs⁹

This step will provide the required skills and training to enable youth to find jobs in the IT/ITES sector. This component also emphasises on the setting up of BPOs to enable ICT-enabled growth.

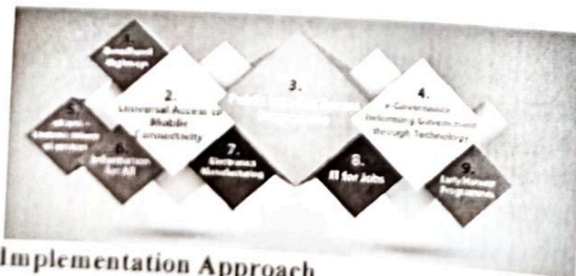
Early harvest programmes¹⁰

These early harvest programmes consist of a range of projects to be carried out within a short timeline. This includes an IT platform for messages, e-greetings from the government, biometric attendance and Wi-Fi in all universities etc.



How Digital India will be realized: Pillars of Digital India

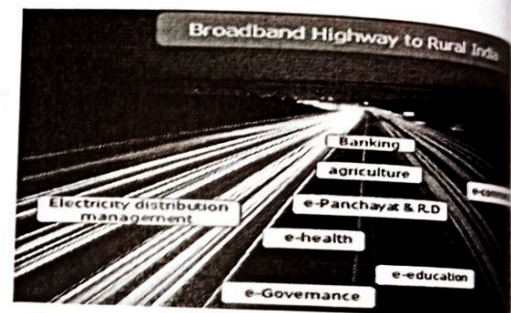
Digital India is an umbrella programme that covers multiple Government Ministries and Departments. It weaves together a large number of ideas and thoughts into a single, comprehensive vision so that each of them can be implemented as part of a larger goal. Each individual element stands on its own, but is also part of the larger picture. Digital India is to be implemented by the entire Government with overall coordination being done by the Department of Electronics and Information Technology (DeitY). Digital India aims to provide the much needed thrust to the nine pillars of growth areas, namely Broadband Highways, Universal Access to Mobile Connectivity, Public Internet Access Programme, e-Governance: Reforming Government through Technology, e-Kranti - Electronic Delivery of Services, Information for All, Electronics Manufacturing, IT for Jobs and Early Harvest Programmes. Each of these areas is a complex programme in itself and cuts across multiple Ministries and Departments.



Implementation Approach

All the initiatives, including establishing and expanding core ICT infrastructure, delivery of services ...etc under the Digital India programme

have definitive completion time targets. Most of the initiatives are planned to be realized within the next three years. The initiatives planned for completion ("Early Harvest Programmes") have already started going live and some have been completed. The Digital India programme is pulling together many existing schemes and schemes will be restructured, revamped and implemented in a systematic manner. Many elements are only improvements with minimal cost implications. The common branding of programmes as Digital India highlights their transformative impact. In implementing this programme, there would be consultations across government, industry, society, and citizens to discuss various issues and arrive at innovative solutions for achieving the desired outcomes of Digital India. DeitY has launched a digital platform named as "MyGov" ([http://mygov.in/\(link is external\)](http://mygov.in/(link is external))) to facilitate collaborative and participative governance. Moreover, several consultations and workshops have been organized to discuss the implementation approach of the vision areas of Digital India.



Target NET ZERO Imports is a demonstration of intent.

This pillar focuses on promoting electronics manufacturing in the country with the target of NET ZERO Imports by 2020 as a striking demonstration of intent. This ambitious goal requires coordinated action on many fronts, such as:

- Taxation, incentives
- Economies of scale, eliminating disadvantages
- Focus areas – Big Ticket Items
- FABS, Fab-less design, Set top boxes, Mobiles, Consumer & Medical Electronics
- Smart Energy meters, Smart cards, micro-controllers
- Incubators, clusters
- Skill development, Enhancing PhDs
- Government procurement
- Safety Standards – Compulsory registration

Support for Labs and MSMEs

- National Award, Marketing, Brand Building
- National Centres – Flexible Electronics, Security Forces
- R&D in electronics

There are many ongoing programs which will be fine-tuned. Existing structures are inadequate to handle this goal and need strengthening. Demand for electronic goods is increasing with a Compound Annual Growth Rate (CAGR) of 22% and is expected to touch 400 Billion USD by 2020. Indian government is also taking several steps to promote manufacturing and investment in this sector, which puts India high on the list of potential places to invest.

National Policy on Electronics (NPE)

Government of India has approved National Policy on Electronics launched in 2012 (NPE 12) which is holistic, investor friendly and market driven towards creating a conducive environment to attract global and domestic companies to invest towards the growing Electronics System Design & Manufacturing (ESDM) sector in India. This gives unique opportunity for companies to consider India as a destination in ESDM sector and be part of the next largest Electronic Manufacturing Hub of the world and also provide value added manufacturing involving medium and high technologies.

Significant progress has been made by Government of India to establish the strong foundation for the (NPE) 2012 framework. This will help for value added manufacturing involving medium and high technologies. The highlights of the policy initiative taken by Government of India include:

Modified Special Incentive Package Scheme (MSIPs) subsidy of 25% of capital expenditure (20% in SEZs) is available and all excise/CVD paid on capital equipment is reimbursed.

Electronic Manufacturing Clusters Scheme which provides 50% of the cost for development of infrastructure and common facilities in Greenfield clusters (undeveloped or underdeveloped area from electronic manufacturing point of view) and 75% of the cost for Brownfield clusters (area where a significant number of existing EMC exists). Land can be made readily available in several of the new Electronic Manufacturing Clusters being supported by the Government of India. Currently around 30 Electronic Manufacturing clusters are notified and GoI is targeting for 200 Electronic Manufacturing clusters by 2020. Preference to domestically manufactured goods in Government procurement.

Extent of government procurement will not be less than 30%. Around 30 electronic products are already notified under this scheme. Export of domestically manufactured Set top boxes and other electronic products are eligible for 2-5 % incentive in Focus Product Scheme under the Foreign Trade Policy. Electronic Development Funds for Research & Development and Innovation in Electronics sector is under active consideration to support start-ups in electronics and IP generation in the area of electronics. Department has accorded approval for setting up of two semiconductor wafer Fabrication (FAB) manufacturing facilities in the country.

To promote greater research in electronics and IT, Government of India will fund PhD students in Universities across the country for research in industry specific needs. 3000 PhDs will be generated through this program in the area of electronics & IT/ITES. Providing opportunities for skill development for the private sector through two Sector Skills Councils- Telecom and Electronics. Under the scheme for providing support for skill development, Government of India provides 75% to 100% of training cost for industry specific skills for skilled and semi-skilled workers. Opportunities for investment in testing laboratory infrastructure under the mandatory standards regime brought in force.

Several State Governments, including Andhra Pradesh and Karnataka have already announced complementary incentives as part of their State Electronic Policies. Electronic Manufacturing Clusters have been announced by states of Madhya Pradesh, Andhra Pradesh, Punjab, and Kerala. Other states are also in process of taking similar initiatives, thereby offering a host of incentives and facilities for ESDM investors. In addition, to recognize and motivate the Micro Small and Medium Scale Enterprises (MSMEs) in the Electronic System Design & Manufacturing (ESDM) sector, the Government of India (GoI) has announced a national scheme for the sector. The Scheme aims at providing financial support to MSMEs to promote manufacturing, to build quality into Indian manufacturing & also to encourage exporters. The support under the Scheme will be provided in the form of reimbursement to the manufacturers in the MSMEs. The scheme for providing financial support as Grant in Aid is expected to benefit the manufacturers, domestic industry, exporters in the electronics sector. This will also assist to attract value added manufacturing involving medium and high technologies. The Scheme will provide GIA for the following activities: Reimbursement of expenses relating to compliance of electronic goods with

"Indian Standards" notified by DitY. The total GIA for one model is limited to '1 Lac, only for 200 models (maximum). Reimbursement of expenses for testing and certification required for export. The total GIA under the Scheme for one model is '1.25 Lac, 800 models (maximum). Development of Electronic Manufacturing Clusters by MSMEs for diagnostic study, soft intervention and for preparing Detailed Project Reports, etc. The Total GIA available under this Section of the Scheme for Development of Clusters of '10 Lac /Cluster (max) would be available for setting up of 20 Clusters. All these incentives are available for electronics design and manufacturing unit. This is also available for relocation of manufacturing plant from foreign country. Some of the sector includes Semiconductor FAB, Telecom products, LED FAB and products, automotive electronics, Semiconductor ATMPs, Consumer Electronics and Appliances, Hand-held devices including Smartphone and Tablets, Strategic Electronics, EMC, Avionics and Medical Electronics etc. The product based R&D expenditure has also been included under MSIPS. Approach and Methodology for Digital India Programme are: Ministries / Departments / States would fully leverage the Common and Support ICT Infrastructure established by GoI. DeitY would also evolve/ lay down standards and policy guidelines, provide technical and handholding support, undertake capacity building, R&D, etc.

The existing/ ongoing e-Governance initiatives would be suitably revamped to align them with the principles of Digital India. Scope enhancement, Process Reengineering, use of integrated & interoperable systems and deployment of emerging technologies like cloud & mobile would be undertaken to enhance the delivery of Government services to citizens. States would be given flexibility to identify for inclusion additional state-specific projects, which are relevant for their socio-economic needs.

- E-Governance would be promoted through a centralised initiative to the extent necessary, to ensure citizen centric service orientation, interoperability of various e-Governance applications and optimal utilisation of ICT infrastructure/ resources, while adopting a decentralised implementation model. Successes would be identified and their replication promoted proactively with the required productization and customisation wherever needed.

- Public Private Partnerships would be preferred wherever feasible to implement e-Governance projects with adequate management and strategic control.
- Adoption of Unique ID would be promoted to facilitate identification, authentication and delivery of benefits.
- Restructuring of NIC would be undertaken to strengthen the IT support to all government departments at Centre and State levels.

The positions of Chief Information Officers (CIO) would be created in at least 10 key Ministries so that various e-Governance projects could be designed, developed and implemented faster. CIO positions will be at Additional Secretary/Joint Secretary level with over-riding powers on IT in the respective Ministry.

Conclusion

The digital marketing will minimize the cost of marketing and online marketing will be found and the increase the awareness, the promotion of business through online will reduce the cost and increase the product sales. The digitalization will bring new technologies and applications in to the nation. E-commerce will have long term sustainability development in the business and it finds a good way to retain their profits in the business.

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