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FROM THE DESK OF THE EDITOR

A warm welcome to the Second issue of “**Amity Journal of Management (AJM)**”

The first issue of AJM had focused on the “Management of Social and Economic Issues” of India. Therefore, it is very apt to look into the implementation aspect of policies and plans related to social and economic development. No industry in India or abroad could survive and prosper without taking help of Service Industry. Service Industry is the backbone of the Indian economy. Services are playing a vital role in the development of the Large, Medium and Small Manufacturing Industries. Therefore the theme of this edition is- “Role of Service Sector in Growing Indian Economy”.

Our second issue of Amity Journal of Management focuses upon the strategies related to service industry. Articles, Research Papers and Case Studies related to service industry are published in this edition. This includes Banking, Tourism, Patent, Copyright and E-learning.

Most of the articles published in this edition are authored by eminent professors of Indian Institutes. The first article presents result from quantitative study, conducted at Small Medium Enterprises (SMEs) in Madhya

Pradesh, India. The paper has found out the factors, which may result in internationalization of Indian SMEs. The second article presents criteria for evaluating the pedagogical usability of digital learning material. In practice the role of content is to give the learner a chance to choose the most suitable learning material possible for any learning situation. In the third article the scope of legal firms and laws related to patents and copyrights in resolving pharmaceutical industry problems have been discussed. The fourth article deals with the role of service quality in influencing consumer behavior. The fifth article is a time series based seasonal tourist arrival analysis of the travelers. It gives detailed information about the seasonal fluctuation of tourist arrival in India. Finally a book review based on the market distribution channels in India has also been inducted. The review is terse, yet effective and elicits current problems associated with the product and service distribution channels of India.

So, enjoy your reading and be a part of the change.

Dr. Anil Vashisht
Chief Editor (AJM)

SMEs' INTERNATIONALISATION DETERMINANTS AND CAPABILITIES: EVIDENCE FROM MADHYA PRADESH, INDIA

*Dr. Manoj Patwardhan, **Chandra Sekhar

ABSTRACT

Internationalisation of SMEs is an important element of economic development and firm growth. The article presents result from quantitative study, conducted at Small Medium Enterprises (SMEs) in Madhya Pradesh, India. Employees working in SMEs were interviewed to study the effects of organization's international orientation, marketing mix standardisation, financial capabilities, and international performance. Responses were analysed using factor analysis. The factors were in line with the earlier studies. In particular, India is experiencing balance of payment deficits. In this connection the government has to increase the international activities of their SMEs. These results boost economic growth, cut unemployment and create potential multinational enterprise in the future. Research findings have insightful implication intended for academicians and industry people.

Keywords: Small Medium Enterprise, Internationalisation, Employees, India

INTRODUCTION

Internationalization of Indian Small and Medium Enterprises (SMEs) continues to thrive all over the globe. It is realized that competing globally provides SMEs an economic imperative option. Likewise, Yamakawa et al. (2008) consider internationalisation as the outcome of the dynamic interaction between organisations and institutions. During the last few decades internationalisation as a phenomenon has been researched by many scholars from different points of view (Korsakienė and Tvaronavičienė 2012). The small business sector has become more important as it emerges as a dominant force affecting the growth of national economies. Small-firms are becoming international and over the last decades, have felt the need for business success (Saixing et al. 2009; Rundh 2007). The process is deemed to create an extra-ordinary competitive environment for India, as they do not appear to be ready to face the challenges and opportunities that globalization currently presents. In 2007, the European commission stated that many developing countries have implemented internationalisation policies to increase international activities of SMEs and to boost the economic growth of the nation. Because of these activities, there is an increase in the average of global trade i.e. 6% since 1990, faster than the global Gross Domestic Product (GDP). Internationalisation of SME is an important element of economic development and firm growth ((Ruzzier et al. 2007).

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SMEs in India

The contribution of the SMEs to the growth and development of Indian economy has multiplied over the last decade. Today SMEs are the backbone of Indian economy, and accounts for significant part of international trade. SMEs contribute 17% to Gross Domestic Product (GDP), and account for 40% of total exports, contributing 45% to manufacturing output, and employing 40% of India's workforce [1]. It is the second largest employer of human resources, after agriculture (Javalgi et al., 2011).

Table 1: Production Growth of Micro, Small, and Medium Enterprises (MSME) Sector in India (1996-1997 to 2007-2008)

Year	%age Growth Rate of MSME Sector	%age Growth Rate of Industrial Sector
1996-97	11.32	6.08
1997-98	8.43	6.65
1998-99	7.70	4.09
1999-00	8.16	6.68
2000-01	8.23	4.97
2001-02	6.08	2.71
2002-03	8.68	5.70
2003-04	9.64	6.90
2004-05	10.88	8.40
2005-06	12.32	8.10
2006-07	12.60	11.51
2007-08 (P*)	13.00	8.00

Source: Ministry of Commerce & Industry, Govt. of India. (10334) [2]; P: Projected.*

The main goal of this paper is to study the effects of organisation's international orientation, marketing mix standardisation, financial capabilities, and international performance.

LITERATURE REVIEW

Literature on internationalisation of small- and medium-sized firms has grown quickly in the last two decades (Al-Hyari et al. 2012). D'Angelo et al. 2013; Wheeler et al. 2008; Leonidou et al. 2002; Katsikeas et al. 2000 have conducted recent studies on SMEs internationalization. For SMEs, to compete with the big world player's internationalization is considered to be among the most important motivations (Hussain et al. 2013). In 2007, Acedo and Jones defined international orientation as the manager's capabilities that describes the positive attitude of managers towards exporting, international activities and stays abroad. Earlier researchers have stated that international orientation is extremely important to global firms. It includes the international outlook of the firm. The firm international outlook demonstrated by the global focus of the management results in higher foreign sales ratios. However, marketing capabilities refer to organizations' understanding of the customers' needs, which are important to position the marketing program appropriately (Olejnik and Swoboda 2012). In particular, marketing-mix standardization is the extent to which the marketing programmes are identical across countries. Earlier researchers have stated that the level of marketing-mix standardisation depends on the operation mode of the SMEs. Similarly, Kuivalainen et al. 2010; Sapienza et al. 2006 concluded that smaller firms face more difficulties in obtaining the necessary funds for research and development, marketing, exporting and internationalisation. Because of greater financial resources, larger firms are able to accumulate larger stock of capabilities as compared to its competitors. The financial resources (i.e. monetary resources) are not available if there are no financial capabilities (i.e. connections to different types of investors) which are needed to acquire and manage the organization (Kuivalainen et al. 2010). The financial capabilities should have a positive effect on the degree of internationalisation and international performance. As per Augier and Teece (2007), organizational/managerial capabilities refer to managerial competencies related to organisational and managerial processes, knowledge, and skills of employees, and efficient organisational structure. It motivates organisational members to communicate effectively, be creative, to share, and develop ideas (Olejnik and Swoboda 2012). The organisational capabilities of SMEs are subsequent to its international performance. It

helps the firm to understand international activities and to translate its experiential knowledge into figures and numbers.

RESEARCH METHODOLOGY

This study employed a quantitative research design using a survey method. The survey instrument for this research was a structured survey questionnaire. We conducted fieldwork as well as questionnaires sent via electronic means to gather basic information and develop a broad and representative database in line with our empirical research needs. The context for the research was to gather personal information from employees working in the small medium enterprises operating in various geographic location of Madhya Pradesh, India.

The software used for the statistical analysis was SPSS version 19. Before using data for analysis, the normality condition of data was checked. The standard range for normality is skewness and kurtosis lying between -1 and 1 (Chan 2003). In 2009, Hair et al. claim that for sample size < 30, significant departures from normality can have large impact on results. Based on reviewed literature, the data fulfills normality and other assumptions and could be used for analysis.

Demographic Profile

The characteristics of the sample have been summarized in Table 2. Total 110 questionnaires returned from 250 sent, 89 of which were useable. This translates into an overall response rate of 44 per cent, and a usable response rate of 35.6 per cent.

Table-2: Demographic Characteristics of Sample Respondents

Profile of the Respondents	Freq.	Percent (%)	Mean	Standard Deviation
Respondents Gender				
Male	55	61.8%	1.38	0.48
Female	34	38.2%		
Respondents Age				
Below 25	12	13.5%	2.64	1.08
25 - 35	33	37.1%		
36 - 45	24	27.0%		
46 - 55	15	16.8%		
56 and above	5	5.6%		
Respondents Marital Status				
Unmarried	37	41.6%	1.58	0.49
Married	52	58.4%		
Respondents Academic Qualification				
Graduate	24	27.0%	2.29	0.99
Post-Graduate	25	38.1%		
Professional Degree	30	33.7%		
Others	10	11.2%		

Respondents Work Experience (Years)				
1 - 5 yrs.	20	22.5%	3.75	1.97
6 - 10 yrs.	30	33.7%		
11 - 15 yrs.	14	15.7%		
16 - 20 yrs.	12	13.5%		
21 - 25 yrs.	6	6.8%		
More than 26 yrs.	7	7.9%		

RELIABILITY

To establish internal consistency, Cronbach's α value for reliability were calculated. The scales were reliable, with the composite reliabilities ranging from 0.832 to 0.938, greater than the benchmark of 0.70. The generally applied acceptability limit for Cronbach's alpha has the value 0.70 (Hair et al. 1998). Table 3 shows the reliability level for each scale and factor loadings for each item in a scale.

Exploratory Factor Analysis

Before conducting the analysis, tests of sampling adequacy were conducted. The Kaiser-Meyer-Olkin (KMO) statistic is 0.779, appropriately greater than the recommended cut off 0.60. Furthermore, the Bartlett test of sphericity was significant, at the 1% level of significance.

Items "MFC4" is dropped from the Management (organisational) and financial capabilities scale, because of low communality value.

Table-3: Factor Loadings and Composite Reliability (CR).

Factor items and composite reliability (CR)		Factor Loading			
		IOR	MMX	MFC	IPR
International orientation (IOR)S; (CR=0.832)					
IOR1	We encourage our employees' international orientation	0.795			
IOR2	We believe that the future of the firm lies in international markets	0.814			
IOR3	We travel abroad to learn about cultures	0.696			
IOR4	We do not perceive different mentalities to be strange	0.756			
IOR5	We believe that geographic distance to overseas markets is not problematic at all	0.785			
Source: Olejnik and Swoboda (2012)					
Marketing mix standardisation (MMX); (CR=0.925)					
MMX1	Our marketing program is standardised globally		0.853		
MMX2	We try to reach a similar positioning of our product		0.838		

MMX3	We standardise the price as compared to competitors		0.864		
MMX4	We have the same advertisement across countries		0.820		
MMX5	Our distribution systems are similar worldwide		0.912		
MMX6	Customer needs in our industry are similar worldwide		0.825		

Source: Olejnik and Swoboda (2012)

Management (organisational) and financial capabilities (MFC); (CR=0.938)

MFC1	Our staff is skilful			0.792	
MFC2	Our organisational structure functions well			0.788	
MFC3	Our different functions are well coordinated with one another			0.751	
MFC5	We have succeeded in our recruitment			0.900	
MFC6	We enjoy an encouraging atmosphere			0.774	
MFC7	Our resource management has become more efficient through experience			0.777	
MFC8	We have a learning organisation			0.720	
MFC9	We can utilise the expertise of our staff in different tasks			0.788	
MFC10	We have excellent investment expertise			0.799	
MFC11	We have good connections to different investors			0.731	
MFC12	We constantly follow the company's financial condition			0.790	

Source: Kuivalainen et al. (2010)

International performance (IPR); (CR=0.781)

IPR1	We have met our international market share objectives				0.689
IPR2	We have achieved the turnover objectives we set for internationalisation				0.881
IPR3	In general, we are satisfied with our success in the international markets				0.724
IPR4	Internationalisation has had a positive effect on our firm's profitability				0.782

Source: Kuivalainen et al. (2010)

Eigenvalue	7.12	4.52	3.01	2.43
Percent of variance explained	26.39	16.73	11.17	9.03
Total Variance explained	63.32			

RESULT AND DISCUSSION

International Orientation (Factor1)

The factors measure the managers' capabilities and their attitude towards export related activities and international operations. It explained 26.39% of its underlying variables and its Eigen value is 7.12. It is a composite index of five variables with reliability coefficient (0.832) and the factor loading ranging from 0.696 to 0.814. The variable IOR1 (0.795), IOR2 (0.814), IOR4 (0.756), and IOR5 (0.785) are contributing more weight to factor International Orientation, followed by IOR3 (0.696). The factor is in line with the earlier study (Olejnik and Swoboda 2012).

Marketing-mix Standardisation (Factor 2)

The factor measures the degree to which the marketing programs are operating across the country. It explained 16.739% of its underlying variables and its Eigen value is 4.520. It is a composite index of six variables with reliability coefficient of (0.925) and the factor loading ranging from 0.820 to 0.912. All the variables are contributing significant weight to the factor so called marketing mix standardisation. The factor is in line with the earlier studies (Olejnik and Swoboda 2012).

Management (organisational) and Financial Capabilities (Factor 3)

The factor measures the managerial competencies related to organisational and managerial process and its structure. This factor management (organisational) and financial capabilities consist of 11.178% of its total variance of its underlying variables with Eigen value 3.01. It is a composite index of eleven variables with reliability coefficient (0.938) and the factor loading ranging from 0.720 to 0.900. Almost all the variables are contributing significant weight to the dimension. The factor is in line with the earlier studies (Kuivalainen et al. 2010).

International Performance (Factor 4)

The factor International Performance consists of 9.032% of its total variance of its underlying variables with Eigen value 2.439. It is a composite index of four variables with reliability coefficient (0.781) and the factor loading ranging from 0.689 to 0.881. The variable IPR2 (0.881) is contributing maximum weight to the factor followed by IPR4 (0.782), IPR3 (0.724) and IPR1 (0.689). The factor is in line with the earlier studies (Kuivalainen et al. 2010).

CONCLUSION AND IMPLICATIONS

The paper has found out the factors, which may result in internationalization of Indian SMEs. The empirical study of our research shows that Indian SMEs are affected by the observed four factors for internationalization. Internationalization of SMEs is of great importance as it strengthens the economy and provides more business and employment, significantly in rural India. The observations from results draw an implication, which enumerates the challenges for business leaders and grooming young managers to lead the Indian SMEs in international markets by meticulously taking care of different factors that may affect the retention in international market. Out of the discussed factors, orientation is a vital aspect as it depends on managers' attitude and capabilities. The further research in this field can be a study of the foreign countries, acceptance of Indian SMEs, cultural adaptability, and marketing positioning factors for Indian SMEs. In particular, India is experiencing balance of payment deficits. In this connection the government has to increase the international activities of their SMEs in order to boost economic growth, cut unemployment and create potential multinational enterprise in the future. The limitation of the research can be its observed geographical area as the research was limited to Madhya Pradesh. The future study may be done in others part of India.

Notes:

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THE ROLE OF CONTENT MANAGEMENT IN E-LEARNING – AN EMPIRICAL STUDY IN WEST BENGAL

**Dr. Pranam Dhar*

ABSTRACT

E-learning is becoming an influential force in higher education today. Development of e-learning material or web-based training tools requires the collaboration of content writers, editors, experts, system designers, domain subject matter experts, and web developers. The present study discusses the role of content, its enhancements to a web-based training architecture to enable collaboration among these contributors and method of dissemination. The collaborative content development system aims at analysis and determination of the level of the content which is generated by multiple authors as well as knowledge of the students. With the evolution of Internet, it became apparent to developers that this medium could do a little more than give static information. Collaborative content creation tools are very much necessary for any e- Learning system, where the content plays a vital role. Practically everyone in the Internet believes that “content is king” and “you need a good content”. But very few webmasters or content writers have taken it seriously. There are still too many sites around which have no real content or are simply monotonous. “The content is very important.” The reason is quite simple; content is the thing that attracts viewers and retains their attention. Content is the backbone of any Learning Management System (LMS). And, perhaps the important aspect of collaborative content creation is that the content can be shared by all users in an interactive way. After brief review of the existing literatures available, it is clear that no structured study has yet been made on the collaborative development of content creation in smoothing up the e-learning process depending on the merit and reception capacity of the students. The present study is an attempt to determine the various components of content, the level of the student as also to determine the level of content to be provided to the user. To determine the role of different multimedia components behind Content creation a neat sampling design process is required. This paper presents criteria for evaluating the pedagogical usability of digital learning material. In practice the role of content is to give the learner a chance to choose the most suitable learning material possible for any learning situation.

Keywords : Content ; Collaborative content development ; domain, e-learning

INTRODUCTION

Time, distance and languages had always been hurdles in the formal education system. After the emergence of IT, the technological solutions like developments in information, communication and computing technologies have made available powerful tools to a large section of the population.

Video Conferencing, Satellite Applications, INTERNET and WWW etc started changing the life styles of modern population. Global connectivity must mean more than technology and commerce; it must lead to global learning, and the inculcation of values that set apart a civilized human being [1].

Shortage of skilled manpower, especially

computer literate information professionals, is one of the basic problems as there are no courses available for training people in many areas. Very few people or personnel are available who strike a balance between content creation, organization and management. In a media organization, where the flow of information is enormous, it's difficult for a few people to organize and manage the content-both the online media and library. The management has to understand the need of digital media, as it is beneficial for the organization in future. Apart from this, there is a need to standardize the fonts for Content Creation and organization worldwide for the content to reach worldwide audience. There is also a need for query and retrieval, presentation of content in a standardized manner. [2]

The use of e-learning environment to support teaching and learning has had a great impact on the way content is developed and managed. In most cases, both teachers and students have had to re-adapt the way they prepare, access and engage with educational matter. [3]

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Building and maintaining content collaboratively is difficult. The content is highly interdependent, is reused in modified form, changes rapidly, and there's a lot of it. Further, a small group of administrators is often responsible for managing a much larger pool of contributors. In order to scale, flexible content management capabilities are needed, along with high-level policies and techniques for using them effectively. This research work "Some Aspects of Collaborative Content Development, its Evaluation in E-Learning Environments" aims to determine the standard of content which can be developed collaboratively by a panel of content writers, editors and experts.

The present study discusses the role of Content and its enhancements to a web-based training architecture to enable collaboration among these contributors and method of dissemination.

THE PROBLEM

In the present study, the research problem, that has been identified, is to identify what we actually mean by "learning content", and to clarify the primary scope of content and its role in E-learning.

The challenge is to develop learning content. Are all contents used for learning, or are they more restrictive? In many cases, they are not helpful as they provide little restriction on both what learning content is, or how it would have to be managed. From this research the focus is specifically on the quality of content and its different components.

OBJECTIVES OF THE PRESENT STUDY

In the light of the above discussion, the present study aims to fulfill the following objectives:

- To highlight the basic issues relating to the Digital Learning Material.
- To find out the usefulness of Content in respect of information, overall presentation and multimedia components.
- To test different factors affecting the selection of content such as clarity, appearance, interactivity etc. in e-learning.
- To present a SWOT analysis of the various elements of Content.
- To study the standard e-Learning system.
- To design the web based server side program to upload the file into server and to store the

content developed by experts into server database.

- To design collaborative content evaluation software and integrate with existing Learning management system.
- To analyse and investigate the methodology of Content Evaluation.
- To explore possibilities of determining the level of knowledge of a student and to provide him Content according to his standard.

BRIEF REVIEW OF THE AVAILABLE LITERATURE

After reviewing the available literature on the role of content and its development in e-learning, both in foreign and Indian context, the following literatures were found available which are presented in brief through the following lines:

Content Management Systems nowadays are used to manage complex publications far more often than some years ago. The basic principles are the separation of structure, content and presentation, an exactly defined workflow management and the management of content in the form of small units, so called assets. This leads to improved quality, better reusability and reduced costs. We focus on similarities of CMS-systems and e-learning systems and the possibility to transfer gained experiences from the field of CMS to e-learning systems.[6]

Collaborative content development systems are employed to handle large collections of written material concurrently generated by multiple authors.

A network based infrastructure allows members of a group to interactively and simultaneously create, review and edit product documentation, web content, or other interrelated documents on time and in real time. [7]

Collaboration begins with the unification of content. You need to figure out "what's going on with your content, how it's being used, how it's being managed, as well as the processes you use to create, publish and store it.

Then you need to perform a content audit. During a content audit, you look at your organization's content, analytically and critically, allowing you to identify opportunities for reuse and the type of reuse, what the best processes for creation are and how the use of collaborative technologies may expedite these processes. [8]

Content development plays a key role in e-learning. Designing of content with good interactivity is essential for an effective teaching and learning system. Development of such an interactive content is not an easy task for the instructors. It requires collaborative work among experts from various fields. [9]

Content refers to online training, that provides courseware, and knowledge management that provides informational databases and support tools (Rosenberg, 2001).

Successful e-learning countries have access to content including library materials, newspapers, corporate information, government databases etcetera, online, in their native language (EIU, 2003).

Developing e-learning content for a big heterogeneous group of people is greatly different from developing paper-based course material for a small group of known people (Tozman, 2004).

According to Grady Booch, "Collaboration has always been an essential part of the fabric of the Internet. E-Mail, instant messaging, content, chat, discussion groups, and Wikis are common collaborative elements that have matured over time. Collaboration among teams is already facilitated through the use of an increasing number of features embedded in standard desktop products such as office suites, shared document reviews, distribution of documents among teams and mechanism for performing common collaborative tasks (Booch 2005).

RESEARCH GAP AND RESEARCH QUESTIONS

The purpose of the current research is to understand the most important factors behind a *good-quality Content* and its effect. In addition to that collaborative development of software based on the factors extracted from survey and methods of dissemination is another important part of the research.

From the minute study of the literature available on the subject (as mentioned above), it becomes crystal clear that, no structured study has yet been made on the collaborative development of content creation to smooth the e-learning process among Indian students.

Therefore, the present study raises the above research issue by highlighting the following research questions:

- What is the significance of Content in e-learning?

- What are the important criteria behind good quality content?
- Is Content a deciding factor for e-learning?
- How to effectively judge the knowledge level of students?
- The answer to the question could lead to a better understanding of how to develop quality Content for e-learning and right method of dissemination among students.
- This research work aims to determine the standard of content which developed collaboratively by panel of content writers, editors and experts.
- In addition, it aims to determine the level of knowledge of students and their capability of gathering knowledge.
- Before studying content from the system some questions will be asked to a student.
- After getting student's answer the system will analyse his/her accessing power and level of merit.
- In this way the system will evaluate the student's knowledge and decide the level on which he/she has to be taught and accordingly that type of content will be supplied.

RESEARCH METHODOLOGY OF THE PRESENT STUDY

For convenience, the present study is sub-divided into two phases or stages.

In Phase 1, a sample survey was conducted on the effectiveness of the contents and their understanding among the students who use them.

In Phase 2, with the result of that survey I have tried to develop a Collaborative Content Development Software (CCDS) which takes input collaboratively from different persons and disseminates among students according to their standard.

NATURE OF DATA AND DATA SOURCE

The data is basically primary in nature. It is obtained from the Male and Female students of Computer Background of different Under Graduate and Post Graduate Colleges of West Bengal based on the official directory of colleges and universities published by the Department of Higher Education, Govt. of West Bengal, WBCUTA and different other relevant official websites.

DATA COLLECTION METHODS

The Communication approach is basically Structured Questioning, i.e. Personal Interview with the aid of Printed Questionnaires. Two sets of separate questionnaires have been prepared – one on the contents of CD-ROM and another on the contents of WEBSITE. Each set has 13 and 14 questions respectively.

METHOD OF SAMPLING AND SAMPLE SIZE

Here, for the purpose of study, random sampling technique is followed. Respondents Sample Size is at least 2000 students, 1000 students each for CD-Rom and Website presentation.

TECHNIQUES OF ANALYSIS

This research work comprises the following techniques - Principal Component analysis, Factor analysis and 10 point Multiple Regression. These tools are used for showing the impact of various factors on the contents of Digital Learning Material.

After collecting samples, Principal Component and Factor Analysis techniques have been applied for finding Individual co-relation of each factor of e-learning material and an attempt is to be made to find out which factors are the most important. Factor analysis can be considered as an extension of Principal Component analysis.

Evaluation in this research is a subjective judgment made by the users of digital learning material. Factor analysis has been done for showing the Visual elements of the Content of the Digital learning material. **The evaluation criteria are applied using a self-evaluation questionnaire that employs an interval scale and Likert scale. eg. 10-(Very Satisfied) ,8-(Satisfied), 6-(Neutral), 4-(Dissatisfied) and 2-(Very Dissatisfied).**

Though, most of the measurement scales used to measure Content's feature to depth by respondents on a scale of 1 to 10 can be treated as Interval scales. Multiple Regression tools have been used to find out the role of independent factor/factors over dependent factor. I have also used ANOVA, which is a well-known technique for examining the differences among means for two or more populations. This technique I have used to find cause-and-effect of one or more factors (Independent variables) on a single dependent variable.

PHASE – I OF THE STUDY

DETAILED STATISTICAL ANALYSIS

Analysis in case of CD-ROM

From the available data, I have made the following Statistical Analysis in case of CD_ROM used by the users:

- Multiple Regression
- Analysis of Variance
- Principal Component Analysis
- Factor Analysis

The detailed analysis is presented below.

Results of the Regression Analysis

The output of the regression model is analysed below:

According to this a (intercept) = 4.111

B1=.214

B2= -.045

B3= -.032

B4= -.075

B5=.116

It can be written as follows:

$$\text{Satisfaction} = 4.111 + .214(\text{Clarcont}) + (-.045)(\text{Visuappeal}) + (-.032)(\text{Qualinfo}) + (-.075)(\text{Colortypefont}) + .116(\text{Interactivity}).$$

Now, from the Statistical significance, R Square value and Beta value indicate that Clarity of Content, Interactivity and Colors Type and Font are significantly significant in the model. The other 2 independent variables are individually not significant and to prove this I have done Stepwise regression also and that clearly indicate the aforementioned observation. When I have added one by one variable then it shows the change of R , R square and Adjusted R square value. And it also indicates that the change is very significant in case of Clarity of Content, Interactivity and Colors Type and Font but not at all significant in case of Visual appeal and Quality of Information. So, at the time of developing e-learning Content expert and developers look at the relationship of Satisfaction with one of these variables or all variables.

Results of the Factor Analysis and Principal Component Analysis

The output of Factor Analysis is obtained by requesting Principal Component Analysis and specifying the rotation. For the Principal Component Analysis, we have taken 6 factors as a

part of the Content in CD-ROM as an e-learning tool. These factors are Subject Matter, Font Colour, Style, and Text size, Grammar, Background Voice and Information.

There are two stages in Factor analysis. Stage one, as we know, is Factor extraction process. As evident from the tables presented above, we have found (from cumulative % column), that, 2 factors extracted together account for 59% of the total variance.

In component 1, it is evident from Component Matrix that Grammar, Background voice and Information have the highest loading of .741, .698 and .715 and this is reflected in Component plot in Rotated Space and Rotated Component Matrix also. This Factor consisting above three variables can be termed as "*Content Depth*".

In component 2, it is evident from Component Matrix that Font color and style and Text size have the highest loading of .627 and .570 and this is reflected in Component plot in Rotated Space and Rotated Component Matrix also. This Factor consisting above two variables can be termed as "*Content Layout*".

Analysis in Case of Website

Next we have analyzed the result of Website Survey. We have run two regression equations on Website. For the first case I have taken SATISFACTION as a Dependent variable and GOOD VISUAL, INTERACTIVITY, HIGH QUALITY DESIGN, EASY INTERACTIVITY, EASY LANGUAGE are independent variables.

In next regression we have tried to find Content is dependent on which variables the most. For the Second case I have taken CONTENT as a Dependent variable and VISUAL APPEAL, AESTHETICS, CLARITY, CONCISE and VISUAL CONTINUITY are independent variables.

From the available data, we have made the following Statistical analysis in case of WEBSITE used by the users:

1. Multiple Regressions
2. Principal Component Analysis
3. Factor Analysis
4. Analysis of Variance

This detailed analysis is presented below.

Factor Analysis:-

Component Matrix ^a	
	Component
	1
Colour scheme	.839
Image	.906
Animation	.914
navigation	.824
page Layout	.846
Relevance	.868
Readability	.789
Font type	.825

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

There are two stages in Factor analysis. Stage one as we know is Factor extraction process. As evident from the above tables, I have found that (from Cumulative % column) 1 factor extracted which alone accounts for 72.64 of the total variance. It is evident that only one component has the Eigenvalue more than 1.

In component 1, it is evident from Component Matrix that all these attributes are highly loaded on the single factor. These attributes are highly co-related with each other. As they are of all in the same nature and highly interrelated. And that's why Component plot in Rotated Space can not be drawn. Therefore this Factor can be interpreted as "*Overall Presentation*".

Results of the Regression Analysis

The outputs of the regression model are depicted in the tables presented in Appendix-II.

According to this a (CONSTANT) = 4.462

$$B1 = -.028$$

$$B2 = -.060$$

$$B3 = .350$$

$$B4 = -.016$$

$$B5 = .122$$

It would be written as follows:

<p>Satisfaction = 4.462 + (-.028) (Highqualitydesign)+(-.060) (Interactivity) +. 350 (Easy interface) + (-.016) (Easy language)+. 122(Good visual).</p>
--

Now, from the Statistical significance, R Square value and Beta value indicate that Easy Interface, Good Visual and Easy Language are significantly significant in the model. The other 2 independent variables are individually not significant and to

prove this I have done Stepwise regression also and that clearly indicates the aforementioned observation. When I have added one by one variable then it shows the change of R, R square and Adjusted R square value. And it also indicates that the change is very significant in case of Easy Interface, Good Visual and Easy Language but not at all significant in case of High quality design and Interactivity. Among these three, Easy Interface is the most important factor. So at the time of developing e-learning Content, Content expert and developers look at the relationship of Satisfaction with one of these variables or all variables.

Results of the Factor Analysis and Principal Component Analysis

The output of Factor Analysis is obtained by requesting Principal Component analysis and specifying the rotations. For the Principal Component analysis, I have taken 8 factors as a part of the Content in WEBSITE an e-learning tool.

These factors are:

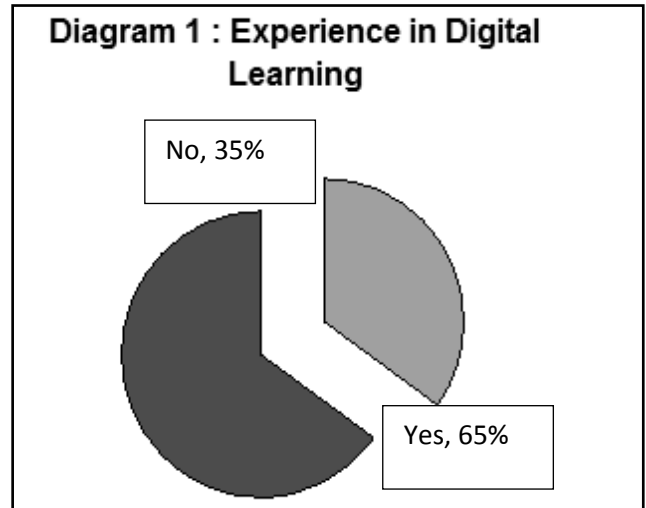
Colour scheme, Image, Animation, Navigation, Page layout, Relevance, Readability and Font type.

There are two stages in Factor Analysis. Stage one as we know, is Factor extraction process. As evident from the APPENDICES, that (from Cumulative% column) 1 factor extracted which alone accounts for 72.64 of the total variance. It is evident that only one component has the Eigen value more than 1.

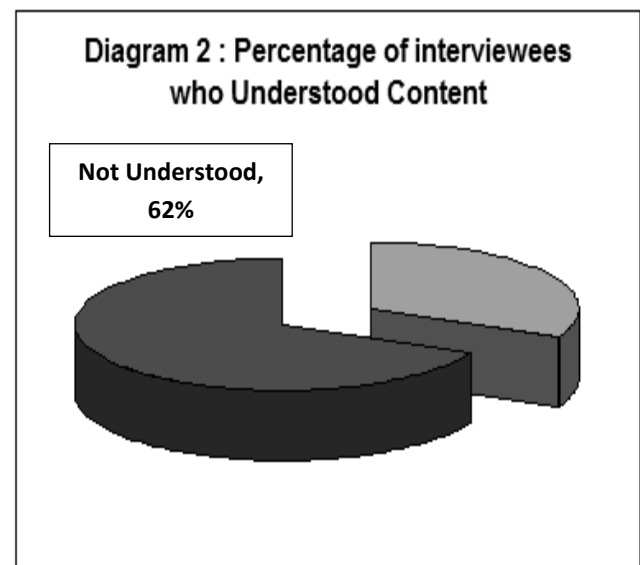
In component 1, it is evident from Component Matrix that all these attributes are highly loaded on the single factor. These attributes are highly co-related with each other. As they are of all in the same nature and highly interrelated. And that's why Component plot in Rotated Space cannot be drawn. Therefore this Factor can be interpreted as "*Overall Presentation*".

Graphical Analysis

Last but not the least, the following two Pie Charts will reflect another finding on the basis of which I have developed the software. The first Pie Chart shows that majority of students have previous experience and knowledge of Digital Content in any form because in the Questionnaire 65% says Yes and remaining 35% says No.



From the interviewers filling up of questionnaires, 38% have said that they have understood and 62% have opposed the point, which is shown through the following Pie Chart. The above chart shows that the majority of the students have previous experience of e-learning. In spite of that, majority of the students have failed to understand the Content of my presentation which is based on their known subject. That result is shown in the next Pie chart).



It reflects that students of different merit and standard demands different Content according to their level on the same subject. Seeing the above results, I feel there is a need for an alternative technique for demonstration.

FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

This study gives an idea about the important quality factors/parameters which are important for e-learning. More researchers in future will make the process of digital learning and its contents more meaningful by widening its working area. From the experience that we have gained from the above survey, we thought of developing, and, finally, developed, software, keeping in view the respondents' answers. We honestly believe that there are dependencies between teaching materials quality and e-learning. There are two parts collaborating with each other which are system developer and content provider. The former one provides an open and cross platform for teaching materials presentation. The latter one provides different teaching materials to let students and users to use and share.

PHASE – 2 OF THE STUDY

In this phase of the study, we have thought of developing software keeping in view the experience that I have gained from the above survey and also depending on the respondents' answers. This type of Software is not available in the market because here with the help of CCDS(the name of the software), we can develop different qualities of content for different level of students. Commonly available softwares are dealt with the Content level but this software simultaneously analyzes the level of the students. In addition to that it sends Content to students according to their standard unlike sending a static Content to each and every one.

In this software all marks that have been obtained in different tests will be stored in backend database. On the basis of the marks obtained in tests the system will calculate in database and generate the exact grade of the content. In addition to that, system will also generate the exact level of knowledge of student and according to the level of the student, contents of the same type will be supplied by LMS. After analyzing primary data using various techniques, software is to be developed.

The software is developed for Collaborative Content development and its proper evaluation based on the parameters suggested by the students in response against Questionnaire. Accordingly, the name of the software will be Collaborative Content Development Software (CCDS)

Finally the software depicted here is to be designed by PHP and database to be designed by MySql.

DESIGN OF THE SOFTWARE

GRADE

Content Expert Name : _____ Please type your name : _____

FEATURE BASED

- Use of relevant image/form : Good Average Bad
- Readability of content: Good Average Bad
- Content layout : Good Average Bad
- Ease of comprehension & concise: Good Average Bad
- Overall presentation : Good Average Bad

KNOWLEDGE BASED

- Certain generic content structure : Good Average Bad
- Amount of relevant facts and comprehensibility : Good Average Bad
- Content consistency : Good Average Bad
- Content depth : Good Average Bad
- Clarity with Brevity : Good Average Bad

submit

SCREEN - I

In screen 1, each Content Expert decides the level of content according to its difficulty and knowledge. It is necessary because many knowledge bases fail due to insufficient quality of their content. Typical problems of such repositories are inconsistent formats, inaccurate and ambiguous conclusions. Since many corporate as well as student knowledge bases lack adequate validation mechanism, they become trapped in a vicious cycle of decaying content quality. As a consequence, the knowledge base loses its credibility and acceptance with the relevant users. To prevent this phenomenon content expert judge the content against ten parameters and after clicking "Submit" button this test's mark will be stored in database.

RESULT

FEATURE BASED TOTAL: 15

KNOWLEDGE BASED TOTAL: 15

Grade : Very Good

SCREEN - 2

In screen 2, result (which is calculated in database) is shown as number as well as grade of the particular content.

SCREEN - 3

In Screen 3, each student has to enter his/her previous qualification, his/her rank and whether possess any previous knowledge about the subject which is going to be learnt. After clicking "Submit" button the marks will be stored in database.

SCREEN - 4

In screen 4, each student has to give background knowledge test on that particular subject whether he/she has some previous knowledge on that particular subject or not. If in the previous case (in screen 3), he intentionally or by mistake ticks all 'yes' without knowing the least bit about the subject then he will be properly judged here. After clicking "Submit" button these marks will be stored in database.

SCREEN - 5

In Screen 5, finally software shows the result (which is calculated in database) grade of individual student. After clicking exit he/she exits from the screen. And if clicks continue then he/she will get the content according to his/her standard.

ENDNOTE

The awareness of e-learning has to be increased among Graduate and Post Graduate students to increase the quality of e-learning. In undergraduate syllabus of Engineering and Management, many new subjects have been introduced by different Universities of the world and India as well. But even then, most of the colleges follow traditional classroom Teaching Methodology for all the subjects included in the syllabus. At least one subject in one semester should be introduced, which students will learn without the help of teacher. This will generate feedback and improve the overall quality of e-learning process by increasing productivity through development of user's awareness in e-learning.

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PATENTS: INDIAN DRUGS AND PHARMACEUTICAL INDUSTRY

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ABSTRACT

Pharmaceutical industry is knowledge based and technology keeps on upgrading itself. The process of innovation is long and time consuming. There is a constant need for upgrading the technology. This results in growing need of protection of innovations. The Trade Related Intellectual Property Rights (TRIPs) Agreement was born to protect the interests of the industry, trade and services.

*Although the government has to look at the interest of both the parties i.e. the manufacturers and the consumers, but the need of the poor masses cannot be ignored since they have to depend on the market for purchasing drugs, given the poor service delivery by both the public and the private hospitals. The scope of the **Patents (Amendment) Ordinance, 2004** and the **Patents (Amendment) Act, 2005** will be tested in the coming days, along with success of the various schemes of the Government of India like the National Rural Health Mission (NRHM).*

Keywords: Patent, Copyrights

INTRODUCTION

Technology is inputs in the production process getting transformed into output. Ideas (particularly the innovative ones) improve the technology of production. There are various examples of ideas and technological improvements that can happen. Moore's Law (attributed to the former chairperson of Intel) asserts that the number of transistors that can be packed onto a computer chip doubles approximately every 18 monthsⁱ. There are different attributes of ideas. *Ideas are non-rivalrous (indivisible) unlike most goods (which are tangible)*. Suppose, I am consuming an idea, which you too are consuming, then the idea can be termed as non-rivalrous. But *ideas are considered as excludable or partly excludable*. Non-excludability means that once an idea is created everybody can use it; nobody can be excluded. There is always a cost associated initially to develop the idea, which can be termed 'fixed cost'. Once the idea is created it can be replicated and sold without any additional cost. So, *marginal cost of producing every extra unit of idea becomes zero*. Therefore, the firm which takes up the onus of creating and selling ideas should charge zero prices from the consumers, if one follows the principle of marginal cost pricing under perfect competition. But if the firm follows such a rule, then it cannot recover the cost of developing the idea, and can undergo losses. Therefore, it has to keep a price, which can at least recover the cost of developing that idea. So,

it has to move away from the principle of perfect competition i.e. marginal cost pricing, and move towards the principle of imperfect competition i.e. price should be greater than the marginal costs. As the firm produces more and more of the idea, the average cost declines and the firm gets *scale-effect*. Due to fixed cost and zero marginal cost associated with the production of idea, there are increasing returns to scale. The institution of patenting, intellectual property rights and copyrights becomes important, to give the original inventor the incentive to create new ideas or to undertake R&D (Jones, 2002)¹.

Intellectual property laws deal with abstract objects, and not physical objects. Intellectual property rights are very much related to the market. They have an important role in constituting markets in information. Given the overtly economic character of intellectual property legislations, one possibility worth investigating is that economic theories, which may or may not be contradictory to one another, provides a justification for enactment of intellectual property rights. These rights can be different from each other in terms of legal detail and character. *A patent monopoly gives the owner rights against the independent discoverer of the same invention, while copyright offers rights against copying but does not prohibit the independent creation of the same work*. From the point of view of economics, property rights must be the best way to ensure that individuals devote sufficient resources to the creation of abstract objects. Intellectual property rights have to be based on the outcome of a cost-benefit calculation from the

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¹ Jones, Charles I (2002): Introduction to Economic Growth, 2nd Edition, WW Norton & Company

point of view of economic rationality. Patent statutes are meant to protect inventions (Drahos, 1996)². *Protection is conditional upon satisfying various criteria of which novelty and inventiveness are two important examples.* According to historical facts, connection between intellectual property, science and economic development is contingent and local rather than necessary and universal. Imperial China for example achieved spectacular outcomes in science without relying on intellectual property rights (Needham, 1969)³.

Pharmaceutical industry is knowledge based and technology keeps on upgrading itself. The process of innovation is long and time consuming. There is a constant need for upgrading the technology. This results in growing need of protection of innovations. The Trade Related Intellectual Property Rights (TRIPs) Agreement was born to protect the interests of the industry, trade and services.

INDIAN PHARMACEUTICAL INDUSTRY

The Indian pharmaceutical industry has shown satisfactory progress in terms of infrastructure development, technology base and product use. It has shown domestic sales of US \$ 4 billion and exports of over US \$ 3 billion, during the fiscal year 2004-05, according to the Economic Survey 2004-05. The industry produces bulk drugs belonging to all major therapeutic groups requiring complicated manufacturing processes and has developed **good manufacturing practices (GMP)** compliant facilities for the production of different dosage forms. The **pharmaceutical industry is capable of developing cost-effective technologies in the shortest possible time for drug intermediaries and bulk actives without compromising on quality**, which is realized through the country's strengths in organic synthesis and process engineering. India has gained fame as a low cost producer of antiretroviral and supplier of the same to international organisations and more importantly to the needy patients in Africa.

The R&D effort in India has focused on development of new molecules. Rs. 150 crore has been provided under the **Pharmaceutical Research and Development Support Fund**. A **Drug Development Promotion Board** under the **Department of Science and Technology** has also been set up for the utilization of this fund. India's biotech research is concentrating on areas like

vaccines, diagnostics, molecular and cellular biology, cell culture, fermentation and hybridoma technology. Recombinant vaccines (for typhoid, rabies and hepatitis B), HIV 1&2 diagnostics test kit and gene probe test for TB are some of the important areas where research is being carried out.

The number of drugs and pharmaceutical units in India has increased from 1,752 in 1952-53 to 20,053 in the year 2000-01, owing to various institutional changes (and laws), which has been discussed in the latter part of this article.

Government of India is honouring its binding commitment to change the Patents Act 1970 to conform to the **TRIPS (Trade Related Aspects of Intellectual Property Rights)** provisions. In this process, the Act has been amended twice in 1999 and 2002. On 26, December 2004, the Government promulgated the **Patents (Amendment) Ordinance, 2004**, followed by the amended Patents Rules 2005, issued on 31st December. The **Third Amendment to the Patents Act, 1970** was to be tabled in the winter session of Parliament in 2004, but the Government's justification for the Ordinance was that the TRIPs (Trade Related Aspects of Intellectual Property Rights) agreement under the **GATT** signed in 1994, required WTO members to make their domestic patent laws TRIPs compliant by 1st January 2005 or else face retaliatory measures from other WTO members. The main objective of the **Patents (Amendments) Ordinance 2004** was to introduce product patents for food, pharmaceuticals and chemicals, preventing others from manufacturing through different processes, without taking permission from and paying royalty to the patent holder. To make the Patents Act 1970 TRIPs compliant, the erstwhile NDA (National Democratic Alliance) government had carried out, among many others as well, *two important amendments—extension of term of patent protection from 7 to 20 years and grant of exclusive marketing rightsⁱⁱ to patents applicants or "Mail Box"* candidates even before approval of the patents and thus gave them a monopoly over the products ahead of completion of formalities.

One can conclude that the Ordinance is only a replica of the earlier 'Mail Box'ⁱⁱⁱ Act. Thus (a) it simply states in general terms that a patent application has to show that there is novelty and an inventive step involved in the new product. But both the **Indian Pharmaceuticals Alliance (IPA)** and the **Indian Drug Manufacturers Association (IDMA)** have warned against the strategy of 'evergreening' of patents by allowing

² Drahos, Peter (1996): A Philosophy of Intellectual Property, Dartmouth

³ Needham, J. (1969): The Grand Titration.

the filing of patent applications for new forms of older patented drugs and for new uses of older drugs, thereby trying to block the entry of generic drugs into the market^{iv}. By allowing the 'evergreening' practice, off-patent drugs used for even common ailments, which are in the generic category could get patented and monopolised. Evergreening is possible because patentability is not defined. (b) A change in the procedure for filing opposition against a patent application has been made. However, by not making the opposing person/agency a party to the proceedings, the Ordinance, in the name of curtailment of delay in disposing of objection petitions, ensures that patents are by and large granted as a matter of course and denial would become an odd exception. (c) The clauses related to Compulsory Licensing and Government takeovers of patents have been left as vague as they are due to which the so called safeguard of public interest will in practise be nullified on two counts -- *one*, the procedure for Compulsory Licensing continues to be cumbersome and time consuming, and *two*, the royalty to be paid to the patent holder has no fixed ceiling (Keayla, 2005)⁴.

The Patents (Amendment) Bill, 2005, introduced in the Parliament in March, 2005 with the objective of making the Patents Act compatible with India's international obligations, particularly under the Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS Agreement) had the benefit of detailed discussion in both the Lower and Upper Houses, pertaining to issues like patentability of micro-organisms and the definition of 'pharmaceutical substance' to mean "a new chemical entity (NCE)" or "new medical entity (NME)".

EARLIER PATENTS SYSTEM

Production of modern medicines by domestic units started with the setting up Bengal Chemical and Pharmaceutical Works in 1892, which was followed by the establishment of Alembic Chemical work in 1907 and Bengal Immunity in 1919. Before the existence of Patents Act 1970, the patent law framed by the Britishers viz. **Patents and Design Act 1911 product patent system** was being practised. The prices of medicines and their availability were a serious issue during those times. According to the **Report of the American Senate Committee** headed by Senator Kefauver,

⁴ Keayla, B.K. (2005): Patents (Amendment) Ordinance 2004: A Critique, Third National Colloquium on Economic and Social Implications of the New Patent Regime, presentation at the India International Centre 1, February.

the prices of antibiotics and other medicines sold by the MNCs in India used to be the highest in the world. During that period 85% of the medicines available in India were produced and distributed by the Multi National Companies (MNCs). **Hindustan Antibiotic Ltd. was founded in 1954**, in the first Five Year Industrial Policy Plan (1950-1955), with the technical assistance of the **WHO (World Health Organisation)** and **UNICEF (United Nations Children's Fund)**. Its goal was to reduce the country's dependence on external antibiotics drug supplies and provide supplies at lower prices than those posted by NMNCs. In the same way, the Government of India promoted drug production from domestic raw materials. Thus, local units started to produce sulfamides and anti-infectious drugs. In the **Second Five Year Plan (1955-1960)**, the company **Indian Drugs and Pharmaceuticals Ltd.** was set up to help in the production of low cost drugs with the technical help of the then **USSR** (Felker, 1997)⁵. Process patent system was introduced with short term of patent for only 5-7 years, with the enactment of Patents Act 1970. The licenses of right system were also provided to guarantee effective role of the domestic industry. Over a period the role of the domestic enterprises increased tremendously and virtually 85% of the pharmaceuticals produced and distributed in the country are being provided by the domestic enterprises (Keayla, 2005)⁶. Since the 1980s, the industry has grown rapidly due to the enactment of the Patents Act 1970 and announcement of the **Drug Policy 1978** (Lanjouw, 1997)⁷.

The **Patents Act 1970**, India, had been conducive to the growth of pharmaceuticals and other industries, since it provided process patents (and not product patent) for pharmaceuticals and agro-chemical products in addition to food substances and other chemical based products. **Justice Rajagopal Ayyangar Committee Report 1958** provided a techno-legal-developmental critique

⁵ Felkar, G., Choudhuri, S., Gyorgi, K. and M Goldman (1997): The Pharmaceutical Industry in India and Hungary: Policies, Institutions and Technological Development, World Bank Technical Paper No. 392

⁶ Keayla, B.K. (2005): Patents (Amendment) Ordinance 2004: A Critique, Third National Colloquium on Economic and Social Implications of the New Patent Regime, presentation at the India International Centre 1, February.

⁷ Lanjouw, J.O. (1997): "The Introduction of Pharmaceutical Product Patents in India: Heartless Exploitation of the Poor and the Suffering", Centre Discussion Paper No. 775, Economic Growth Centre, Yale University.

of the well accepted fundamental grounds on which the limited patent monopoly was being granted by all countries as part and parcel of their political economies—the crucial rationale being that patents and their limited monopoly rights are ultimately granted and given legal protection for making them available for national development by encouraging potential inventors for undertaking 'R&D of possible industrial use' and consecutively giving rise to viable technological-industrial development. The two Enquiry Committees namely **Bakshi Tek Chand Committee-Patent Enquiry Committee (1948-50)** and **Justice Ayyangar Committee-Patents Revision Committee (1957-59)**, recognised that although India had a patent system in some form or the other, the country did not derive much benefit from the previous or the then existing systems (Damodaran, 2005)⁸. The first investigation into the pharmaceuticals market in a Third World country was carried out by the **Hathi Committee**, which was formed in February, 1974 by the Government of India and chaired by Jaisukhlal Hathi. One of its principal conclusions was that brand names were responsible for the large number of unnecessary and often irrational formulations on the market⁹.

The introduction of the **MRTP Act** and the **FERA** reduced the level of foreign direct investment (FDI) in the pharmaceutical sector in the 1980s. However, with the adoption of trade liberalisation measures, the limit for automatic approval of FDI was first raised from 40 to 51 percent and subsequently to 74 percent and in 2001, it was raised to 100 percent.

HEALTH SITUATION IN INDIA

The major cause of concern in the health area in India is the vast population, which now exceeds 1,000 million. HIV/AIDS, which has emerged as one of the most serious public health problems in the country, has made countless victims. In mid 2001, the total number of HIV cases was around 3.97 million, which has now reached the level of

more than 5 million. HIV/AIDS is also accompanied by social stigma, which leads to other social and psychological problems. Because of this reason, detection of such cases and timely treatment becomes rather difficult. To overcome this problem, creating community awareness is being emphasized. To eliminate leprosy, a rigorous media campaign was launched due to which the prevalence rate declined from 57 % per 10,000 population in 1981 to 3.74 cases per 10,000 population in March 2001. The objective was to reach elimination at national level by 2004. As regards activities under the revised national tuberculosis control programme the population coverage increased from 120 million to more than 440 million in 2001 with the help of a World Bank assisted project. The government is planning to expand its coverage to 700 million population¹¹.

Diseases like smallpox and Guinea-worm disease have been eradicated from the country, and polio is on the edge of being eradicated. Leprosy, Kala-azar and Filariasis are expected to be eliminated soon. There has been a considerable drop in the total fertility rate and infant mortality rate. The success of these initiatives is seen in the progressive improvement of many demographic /epidemiological and infrastructural parameters over time as reflected below.

INDIA HEALTH SCENARIO: ACHIEVEMENTS BETWEEN 1951 AND 2000

India: Health Policy

The main objective of the **Health Policy** announced by the **Government of India in 2002** is to achieve an acceptable standard of good health for the people. The goal would be to increase access to decentralised public health system by establishing a new infrastructure in deficient areas, and by upgrading the existing infrastructure. Importance has been given to ensure a more equitable access to health services across the social and geographical expanse of the country. Emphasis will also be given to increasing the aggregate public health investment through a substantially increased contribution by the Central government. It is expected that this initiative will be to strengthen the capacity of the public health administration at the state level to render effective service delivery. The contribution of the public sector in providing health services would be significantly enhanced, particularly for the population group, which can afford to pay. Primacy will be given to preventive and first-line curative initiatives at the primary level through

⁸ Presentation by Mr. AD Damodaran in February, 2005 at the India International Centre on the occasion of Third National Colloquium on Economic and Social Implications of the New Patent Regime.

⁹ Hathi Committee, *Report of the Committee on the Drugs and Pharmaceutical Industry*, Ministry of Petroleum and Chemicals, Government of India, New Delhi, April 1975. For a more detailed study on the current state of affairs regarding patents, see: Report of the Technical Expert Group on Patent Law Issues, December, 2006 (aka Mashelkar Committee Report), or go to: http://patentoffice.nic.in/ipr/patent/mashelkar_committee_report.doc.

increased allocations. Emphasis will be laid on rational use of drugs within the allopathic system.

Comparison of International Prices vis-à-vis Indian Prices: Some Selected Products Retail Prices in India and Wholesale Prices in Other Countries Considered (Prices converted into Indian Rupees)

Drugs, Dosage and Pack	Prices in India (Rs.)	Prices in Pakistan (Rs.)	Prices in Indonesia (Rs.)	Prices in UK (Rs.)	Prices in USA (Rs.)
Anti- infectives					
Ciproflaxin HCL 500 mg 10's tabs	29.00	423.86	393.00	1185.70	2352.35
Times Costlier		14.55	13.55	40.89	81.12
Norflaxin 400 mg 10's tabs	20.70	168.71	130.63	304.78	1843.66
Times Costlier		8.15	6.31	14.72	89.06
Ofloxacin 200 mg 10's tabs	40.00	249.30	204.34	818.30	1973.79
Times Costlier		6.23	5.10	20.45	49.34
Cefpodoxime Proxetil 200 mg 6's tabs	114.00	357.32	264.00	773.21	1576.58
Times Costlier		3.13	2.32	6.78	13.83
Anti-Ulcerants					
Diclofenac Sodium 50 mg 10's tabs	3.50	84.71	59.75	60.96	674.77
Times Costlier		24.20	17.07	17.42	192.79
Rantidine 150 mg 10's tabs	6.02	74.09	178.35	247.16	863.59
Times Costlier		12.31	29.63	41.06	143.45
Omeprazole 30 mg 10's cap	22.50	578.00	290.75	870.91	2047.50
Times Costlier		25.58	12.92	38.71	91.00
Lansoprazole 30 mg 10's caps	39.00	684.90	226.15	708.08	1909.64
Times Costlier		17.56	5.80	18.16	48.97
Cardiovasculars					
Atenolol 50 mg 10's tabs	7.50	71.82	119.70	NA	753.94
Times Costlier		9.58	15.96	--	100.52
Amlodipine Besylate 5 mg 10's tabs	7.80	200.34	78.42	338.28	660.21
Times Costlier		25.68	10.05	43.37	84.64
Anti-Viral Fungal					
Zidovudine 100 mg 10's caps	77.00	313.47	331.65	996.16	895.90
Times Costlier		4.07	4.31	12.94	11.63
Lamivudine 150					
Zidovudine 300 mg 10's caps	274.00	NA	NA	4767.02	4988.62
Times Costlier		--	--	17.40	18.21
Anti-histamine					
Ceterizine 10 mg 10's tabs	6.00	35.71	57.50	262.19	927.29
Times Costlier		5.95	9.58	43.70	154.55
Anti-Anxiolytics/ Psychotics					
Alpramazoo 0.5 mg 10's tabs	7.00	160.57	31.05	NA	446.81
Times Costlier		22.94	4.43	--	63.83
Fluxetine 20 mg 10's caps	25.80	444.53	143.40	395.79	1416.42
Times Costlier		17.23	5.56	15.34	54.90
Anti-Cancer					
Boposide 100 mg injection	190.00	554.69	242.90	1217.43	6210.30
Times Costlier		2.92	1.28	6.41	32.68
Cholestrol Reducer					
Atorvastatin 10 mg 10's tab	39.00	NA	565.95	537.74	1102.92
Times Costlier		--	14.51	13.79	28.28
Simvastatin 10 mg 10's tabs	35.00	283.05	187.00	537.74	1149.79
Times Costlier		8.09	5.34	15.36	32.85
Antiasthmatic					
Salmeterol 25 mcg					
Fluticasone 50 mcg inhaler	210.00	NA	782.65	1628.25	NA
Times Costlier		--	3.73	7.75	--
Urology					
Sildenafil Citrate 50 mg 4's tabs	48.00	NA	1356.93	1614.89	1744.93
Times Costlier		--	28.26	33.64	36.35

Conversion rate of exchange considered

Increased access to tried and tested systems of traditional systems of traditional medicine will be ensured. Private players will also be included to play a key role through public-private partnerships (PPP). NRHM (National Rural Health Mission) is the driving vehicle for giving effect to the mandate of the National Common Minimum Programme. The Second phase of Reproductive and Child Health (RCH-II) Program, launched on April 1, 2005 for a period of 5 years, is trying to improve the performance of family welfare in reducing maternal and infant morbidity and mortality, and unwanted pregnancies, and thus lead to population stabilization¹⁰.

CONCLUSION

Although the government has to look at the interest of both the parties i.e. the manufacturers and the consumers, but the need of the poor masses cannot be ignored since they have to depend on the market for purchasing drugs, given the poor service delivery by both the public and the private hospitals. The scope of the **Patents (Amendment) Ordinance, 2004** and the **Patents (Amendment) Act, 2005** will be tested in the coming days, along with success of the various schemes of the Government of India like the National Rural Health Mission (NRHM).

ENDNOTES

ⁱ Gordon Moore made his famous observation in 1965, just four years after the first planar integrated circuit was discovered. The press called it "Moore's Law" and the name has stuck. In his paper *Cramming more Components onto Integrated Circuits* in *Electronics*, Volume 38, No. 8, April 19, 1965, Moore observed an exponential growth in the number of transistors per integrated circuit and predicted that this trend would continue. Through Intel's relentless technology advances, Moore's Law, the doubling of transistors every couple of years, has been maintained, and still holds true today.

ⁱⁱ **Meaning of Exclusive Marketing Rights:** EMRs grants exclusively to an international company to market a product in the field of pharmaceuticals exclusively in the Indian market. The Patents

¹⁰ For more detail, go to: <http://indiabudget.nic.in>, (Economic Survey 2006-07).

(Amendment) Act grants EMRs for 5 years. Thus, the Act is a prelude to putting in place an updated product patent regime in India in line with the WTO (World Trade Organisation) requirements (which envisage allowing product patents from 2005). There are basically three conditions on which EMRs are granted: the new chemical entity should be filed after January 1, 1995; the product should not have been marketed earlier in India; and compulsory licensing wherein the government could reserve the right to allow three or four companies to license and manufacture the same product in case of a major demand-supply shortage. Thus, EMR is almost like a product patent. The critical difference is that the EMR is issued in lieu of the government screening the company's patent legislations. So it could mean that two companies with patent application for similar drugs could be granted EMRs.

ⁱⁱⁱ **Meaning of Mailbox:** Mail Box is a box in which all the applications for the pharmaceutical and agricultural chemical products will be submitted. This box will be opened in 2005. Till that time no examination of applications will be possible.

^{iv} **Examples of Charges of Patenting Trivial Changes**

Case 1: "Substantially Pure" (Fexofenadine Hydrochloride)

- Patent (US 4,254,129) was granted to Aventis in 1979.
- Aventis obtained second patent (US 5,578,610) in 1996 claiming 'substantially pure compound' which was indeed the product on the market, extending its patent life to 2006.
- This is a case where first the patent is obtained for the compound without any reference to purity. Thereafter, a patent is sought for a 'substantially pure' compound. The second patent becomes a hurdle for generic products, as they are also 'substantially pure'.
- Now, if the legislation were to permit patenting of trivial changes (substantially pure), fexofenadine hydrochloride would become eligible for product patent as a post-1995 molecule.
- Total sales of product in India: Rs. 30 crore.

Case 2: "Particle Size" (Oxcarbazepine)

- Patent (US 3,642,775) was granted to Novartis in 1970.
- Novartis obtained second patent (US 20,030,190,361) in 2003 claiming 'particle size' of certain specifications.
- This is a case where first the patent is obtained for the compound without any reference to particle size. Thereafter, a patent is sought for a 'particle size' compound. The second patent becomes a hurdle for generic products.
- Now, if the legislation were to permit patenting of trivial changes (particle size), oxcarbazepine would become eligible for product patent as a post-1995 molecule.
- Total sales of product in India: Rs. 16 crore.

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INTEGRATING TOTAL SERVICE QUALITY IN BANKS FOR BEST PRACTICE

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ABSTRACT

Consumer behavior has always been an interesting subject for marketers. This study examines the satisfaction level of consumer with major National Banks, Private Banks and Foreign Banks in India and services provided by them. It also provides a functional comparison of the two different approaches in terms of SERVQUAL model. The study also analyzes the relationship between deliverance of services and actual customer expectation with the help of factor analysis. The findings of the study indicate that total service quality is a significant determinant of customer satisfaction in Indian banking industry. This study will provide important insights to banks in redefining their corporate image to one that is customer-focused and driven by service quality.

Key Words – Consumer Behavior, Total Service Quality, Banking Sector

INTRODUCTION

Quality management is a system of establishing a defect prevention action program in the production process of any company. Total Quality Management is a technique which seeks to decrease the defect of a product, service or process. Latest dimensions of TQM applied in any service industry are identified by Saravanan and Rao (2007). They are - top management commitment and leadership, benchmarking, customer focus and satisfaction, service marketing, social responsibility, human resource management employee satisfaction, service culture, continuous improvement, and Information analysis.

According to a study done by Milakovich (2005) & Sureshchander et al. (2001), the Total Quality Service (TQS) model is designed for continuous quality improvement in the service industries. TQS movement is a mix of various American and Japanese philosophies and strategies which are further linked to the global search for better quality and lower cost. Initially more Japanese firms succeeded in applying the strategy. But later on it was labeled as Total Quality Management (TQM) in the United States of America. The (TQS) model was derived from the older Total Quality Management (TQM) model and serves to fill in the gaps for measuring intangible dimensions of quality. The success of "TQS movement largely depends on how synergically the various dimensions are espoused

in an ambience of continuous improvement".

Services have been defined in many ways but with no general agreement as to what really constitutes services. The American Marketing Association's definition of services is: activities, benefits or satisfactions, which are offered for sale, or are provided in connection with the sale of goods.

According to Stanton (1986), "services are those separately identified, and essentially intangible, activities that provide want of satisfaction and that are not necessarily tied to the sale of a product or another service. To produce service may or may not require the use of tangible goods. However, when such use is required, there is no transfer of the title to these tangible goods".

Gummerson suggested that "Services are something that can be bought and sold but which you cannot drop on your foot". Kotler, defines services as any kind of performance that one party can offer to another that is essentially intangible and does not result in the ownership of anything. Thus, through different definitions it is understood that services have four important characteristics. They are intangibility, perishability, inseparability and heterogeneity. The service system, therefore, is an integration of all these components, involving a large number of white-collar staff working with a purpose to satisfy the varying needs of customers.

Service system exists because it helps client in meeting their own needs, it offers alternatives that are superior to self-service in cost, time and convenience, and it meets a wide variety of psychological and physiological needs.

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The concept of quality has always given rise to controversies in trying to explain a variety of phenomena. Thus, today different viewpoints regarding the definition of quality in service exist (Logothetis, 1992). However, the most widely used definition is "Quality is meeting or exceeding customer expectations" (Evans & Lindsay, 1996). In the field of banking, TQM refers to a management process and a set of disciplines that are coordinated to ensure that the organization consistently meets and exceeds customer requirements. TQM engages all divisions, departments, and levels of organization. The goal is to deliver the highest value for the customer at the lowest cost, while achieving reasonable profit and economic stability for the bank (Morehouse, 1996). This management approach and theory has been strongly influenced by the ideas of a few American and Japanese practitioners. Among the most widely credited founding fathers are Crosby, Ishikawa, and others. Armand Feigenbaum first introduced the term TQM in 1956. His original exploration was what he referred to as a way out of dilemma imposed on businessmen by increasingly demanding customers and by ever-spiraling costs of quality (Costin, 1994). Among the different quality approaches, a clear preference has been observed, at a universal level, for the adoption of quality assurance principles in the field of banking. The term means the assessment of the actual level of quality rendered plus the effort to modify, when necessary, the provisions of those services (Logothetis, 1992).

For the successful implementation of a quality approach that will eventually lead to quality improvement of the provided services, the following factors are necessary:

1. Trustworthy: the bank must have a good, trustworthy staff that's able to work properly and on time.
2. Eagerness of staff: the staff must be eager and have the desire to work anytime.
3. Proficiency and Capability: the staff must be professional and capable of doing the job they are doing in order to be able to help their clients.
4. Good location: a bank that can be reached quickly, contacted by phone easily is always recommended.
5. Well-mannered staff: polite and smiling face staff can always be close to their clients.

6. Communication: the level of discussion between the employee and the customers must be understandable.
7. Persuasive: employees, while working, must persuade that they work happily.
8. Safety, security: customers will always prefer to work with the bank with low risks.
9. Physical value: the decoration, number of branches, ATM machines, etc., are also factors that help in improving the quality of a bank.
10. Understanding staff: the working staff must understand their clients' needs (Takan, 2001, pp. 94-97).

ELEMENTS OF TQM IN BANKING

Producing a defective product is certainly antithetical to quality. However, preventing defects has not captured the strategic interests of top managers. By focusing on the customers, managers view quality as a means of achieving competitive advantage by providing value to customers.

Customer value has been defined as a combination of benefits and sacrifices occurring when a customer uses a service to meet certain needs.

Certainly, managers must ensure quality through conformance to design specifications. But quality of conformance should be a secondary issue, pursued only after they have seen that design conforms to the needs of the customers. Thus managers should regard quality as an important element to strategy formulation and planning, deciding which customer to serve, which services to offer, and how to provide value to customers and to outperform competitors in doing so. Once top managers decide to compete on the basis of particular dimensions of quality, they enter the realm of strategic planning. This means assuming personal responsibility for continuously improving the systems and processes that provide valued service for customers (Bound, Adams & Ranney, 1994). A popular slogan of the quality movement is "quality begins with the customer." The premise being if customers are the people who receive our work then only they can tell us what they want and how they want it. The quality that comes out of a process is affected by the quality of what goes in and what happens at every step along the way. It follows that we must build quality into every step, process, and system to produce quality in the outcome. To do this, we must collaborate with internal and external customers to determine their needs.

PROBLEMS FACED BY THE BANKS IN APPLYING TQM

While using TQM strategies in banking sector, some problems can occur that limit the TQM's success. The most important problems are:

1. The employees must be supported and given good service from the entire bank such as machines, information, etc. This will affect the quality of services rendered to clients. These elements do not have direct contact with clients but they affect the service quality the employees will work on. The employees are the representatives of the bank. The clients will blame the employees for any mistake that may take place during any banking operation.
2. The reached quality level can be affected by another factor and this is: always adding new working systems, machines, etc., to the operating strategies.
3. Following the technology and changing the machines (computers) in very short periods of time will cause difficulties to the staff to get used to the new system which will make their work more complicated and take more time which will decrease the quality of the service. No doubt changing and improving the system will make the firm more successful in the long run, but when done in short periods, the time needed to operate the system will be long.
4. The last factor is: having the staff working in the same position for long time which will cause the quality of service to decrease by time. For this reason, the employees feel bored from always doing the same operations and same job which will lead to a working staff without job satisfaction or motivation (Takan, 2001, pp. 97-100).

RESEARCH METHODOLOGY

Hypotheses

The study is based on the performance of public sector banks and private sector banks and foreign banks in the Indian market. There may be a number of underlying reasons which may impact the valuation of services by consumers. Specifically, we examine the effect of quality on customer retention in banking industry. According to the conceptual framework discussed previously, it can be concluded that service quality leads to customer retention. However, effective service quality leads to both customer

acquisition and retention. Following hypotheses stem from the question areas that are based on the earlier research findings as:

- H01: Banks are well aware of the operations and benefits of TQM.
- H02: Banks are aware of the terminology of Total Quality Service.
- H03: Banks apply some sort of quality management in their customer service.

QUESTIONNAIRE DEVELOPMENT

The survey instrument was self-administered consisting of a screening question i.e. "Deals with parameters of service quality in relation to customer satisfaction" This question helped to identify and analyze the customer perceived service of bank. The target group consisted of customers of public sector banks and private sectors banks. The research developed service quality criteria for customers of public sector banks and reflected the image of banks in the eyes of an average customer. Finally all information was obtained by 29 item index. For each item respondents used a 5 point Likert scale extending from "Strongly Disagree" to "Strongly Agree". Twenty nine items for service quality and service performance index were developed by the researchers keeping in view the past studies on SERVQUAL and SERVPERF model. Questionnaire responses were collected from professors and professionals from various industries availing services of public sector banks, private sector banks and foreign banks.

DATA COLLECTION AND SAMPLES

The present study was aimed at understanding the impact of service quality on customer satisfaction, acquisition and retention in case of public sector banks, private sectors bank and foreign banks. For this purpose, 271 respondents were selected from Indore, Gwalior, Mumbai, Pune, Bangalore and Hyderabad (M.P., Maharashtra and South India). The respondents were screened as customers who met the following criteria:

- The respondents were randomly stopped in the area where banks were located and asked if they had maintained account with any of the banks under study and have availed the services of their bank for at least past one year from the same place.

As the study was exploratory in nature, the sample of the study was non-probabilistic convenience sample comprising of 271

respondents. Respondents from 6 cities in (India) were requested to respond to the questionnaire. The demographic profile of the sample is given in Table 1.

Table 1

Characteristic	Frequency	Percent
Age		
18-25	74	27.30%
26-35	130	47.97%
36-45	40	14.76%
46-55	16	5.9%
Above 55	11	4.05%
Gender		
Male	143	53%
Female	128	47%
Bank		
SBI	140	51%
Bank of India	05	1.8%
UCO Bank	02	0.7%
PNB	03	1.1%
ICICI	60	22.1%
Axis	08	2.95%
IDBI	03	1.1%
HDFC	27	9.96%
Yes Bank	05	1.8%
Citi Bank	18	6.64%

Statistical Analysis

Data on service quality was first analyzed by factor analysis KMO and Bartlett Test. Bartlett (1938), Bartlett (1951) as factor analysis is a means of examining and describing the internal structures of variables (Lawley and Maxwell, 1926).

RESULTS, FINDING AND ANALYSIS

Factor Analysis

The Kaiser Mayer- Olkin (Table 2) measure of sampling adequacy was 0.934 and the Bartlett tests of sphericity were found to be significant at $p < 0.001$.

Table 2: Showing values of KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.934
Bartlett's Test of Sphericity	Approx. Chi-Square	3.297E3
	Df	406
	Sig	0.000

Table -3: Showing 27-Items for Service Quality with their Mean and Standard Deviation (SD)

		Mean	SD
1	Bank is very prompt in solving all problems instantly as they emerge.	3.6840	.89389
2	Banks provide prompt services to the customer.	3.5948	.89949
3	Bank employees are very helpful to customers and ready to resolve their request.	3.4572	.97498
4	Extent to which the customers' feedback is considered to improve bank's service standard.	3.2156	1.07810
5	Banks are always concerned about updating the customers' information, services used, quality delivered and actual output.	3.3494	1.03150
6	Bank always notifies their customers' about several types of account, balance maintenance, account security and loan processes.	3.4164	.96074
7	Banks possess advanced technology and clarified processes so that services are delivered without delays.	3.6840	.96224
8	Banks excel in delivering services quickly at all times.	3.4572	.94387
9	Bank updates its technology regularly to improve the capability to provide service to customers in a more effective manner.	3.5242	.95631
10	Bank promotional activities like advertisement, publicity, website, brochures are worth the information.	3.4312	.96192
11	Bank has convenient operating hours and working days.	3.5167	1.06360

12	The bank employees hold necessary skills and abilities to act for when required in a critical problem's solution.	3.3680	1.02681
13	Employees are decent and neatly dressed.	3.5911	.96006
14	Employees are always able to keep the customer by proper behavior.	3.5204	.97188
15	The services available in most of the banks are efficient and up to the quality mark.	3.5019	.91270
16	Bank provides quality services and maintains schedule as promised.	3.6543	2.03225
17	Bank providing facilities like A.T.M., Debit Card, Credit Card, Mobile banking, Internet Banking, etc are convenient to the customers.	3.9517	1.00812
18	The ambiance such as air ventilation, outside noise, room temperature, layout of desks and other furnishing are comfortable for customers to interact.	3.5985	1.04138
19	Having bank's branches and A.T.M.'s at those locations which are convenient to all sections of the society.	3.8030	.96691
20	To make customer realize their safety, security, satisfaction and pleasure felt in their bank transaction.	3.6691	.95721
21	Equal treatment to all customers without any partiality by bank employees.	3.4572	.99017
22	Bank giving good services in reasonable time and minimum cost but not compensating with quality.	3.4944	.99108

23	A sense of public responsibility among bank employees in terms of being punctual, regular and sincere.	3.4349	.99272
24	Bank employees are good in understanding customer grievances and processes.	3.4164	.97232
25	Bank procedures and processes are without error (flawless).	3.3717	1.08728
26	Banks keep their records accurate and presentable.	3.4647	.97145
27	Bank employees are consistently generous and courteous.	3.4387	.96242
28	Bank Employees are having the knowledge and caliber to answer customer's specific query and request.	3.4164	1.00255
29	Bank employees deliver caring and individual attention to customers by knowing the customer's best interest at heart.	3.3755	.96791

Analysis

According to the scale used the maximum score to be received is 145 if all the 29 items were rated at 5. However the mean score 101.8586 indicated that 70% of the constructs are explained by items. It indicates that service quality in performing better as per customer aspect in banking is decent in industry. (Refer Table 3)

Table 4: Showing Results of Factor Analysis

Factors

1. Responsiveness
2. Communication
3. Empathy
4. Tangibility
5. Assurance
6. Reliability
7. Courtesy

S. N.	Question	Responsiveness	Communication	Empathy	Tangibility	Assurance	Reliability	Courtesy
1	Employees having knowledge and caliber to answer customer's query							.708
2	Employees are always able to keep the customer by proper behavior.			.701				
3	Employees helpful to customers and ready to resolve their request.	.700						
4	Employees are good in understanding customer grievances and processes.						.696	
5	Banks excel in delivering services quickly at all times.		.670					
6	Banks provide prompt services to customer.	.651						
7	The services available in most of the banks are efficient and up to the quality mark.				.649			
8	Bank employees are consistently generous and courteous.							.646
9	Customers' feedback is considered to improve bank's standard.	.644						
10	Bank updates its technology regularly to improve the capability to provide service to customers in a more effective manner.		.644					
11	The bank employees hold necessary skills and abilities to act for when required in a critical problem's solution.			.633				
12	Bank is very prompt in solving all problems instantly as they emerge.	.631						
13	Banks are always concerned about updating the customers' information, services used, quality delivered and actual output.	.627						
14	Bank giving good services in reasonable time and minimum cost but not compensating with quality.					.627		
15	A sense of public responsibility among bank employees in terms of being punctual, regular and sincere.					.624		
16	Banks possess advanced technology and clarified processes so that services are delivered without delays.		.618					
17	The ambiance such as air ventilation, outside noise, room temperature, layout of desks and other furnishing are comfortable for customers to interact.				.595			
18	Bank promotional activities like advertisement, publicity, website, brochures are worth the information.		.589					
19	Banks keep their records accurate and presentable.						.582	
20	Bank employees deliver caring and individual attention to customers by knowing the customer's best interest at heart.							.580
21	Bank has convenient operating hours and working days.			.574				
22	To make customer realize their safety, security, satisfaction and pleasure felt in their bank transaction.					.566		
23	Bank always notifies their customers' about several types of account, balance maintenance, account security and loan processes.	.551						
24	Bank providing facilities like A.T.M., Debit Card, Credit Card, Mobile banking, Internet Banking, etc are convenient to the customers.				.549			
25	Equal treatment to all customers without any partiality by bank employees.					.546		
26	Employees are decent and neatly dressed.			.522				
27	Bank procedures and processes are without error (flawless).						.515	
28	Having bank's branches and A.T.M.'s at those locations which are convenient to all sections of the society.				.508			
29	Bank provides quality services and maintains schedule as promised.				.411			

F1: Responsiveness

This is the most important factor explaining 13.174% of the total variance. The scale reliability for this factor is 0.5 and loadings range from 0.700 to 0.551. The factors covered here are:

Bank is very prompt in solving all problems instantly as they emerge, Banks provide prompt services to the customer, Bank employees are very helpful to customers and ready to resolve their request, Extent to which the customers' feedback is considered to improve bank's service standard, Banks are always concerned about updating the customers' information, services used, quality delivered and actual output, Bank always notifies their customers' about several types of account, balance maintenance, account security and loan processes. These are the components which affect the overall service quality in banking industry and it gives gap between expectation and performance in terms of Responsiveness, because it can reduce and increase the gap between expectation and performance.

F2: Communication

This is the second most important factor explaining 10.233 % of the total variance. The scale reliability for this factor is 0.5 and loadings range from 0.680 to 0.589. The factors covered here are:

Banks possess advanced technology and clarified processes so that services are delivered without delays, Banks excel in delivering services quickly at all times, Bank updates its technology regularly to improve the capability to provide service to customers in a more effective manner, Bank promotional activities like advertisement, publicity, website, brochures are worth the information. These are the components which affect the overall service quality in banking industry and it gives gap between expectation and performance in terms of reliable parameter. Communication is a very important parameter of expectation and performance gap between customer aspects.

F3: Empathy

This is the third most important factor explaining 9.869% of the total variance. The scale reliability for this factor is 0.5 and loadings range from 0.701 to 0.522. The factors covered here are- Bank has convenient operating hours and working days, the bank employees hold necessary skills and abilities to act when required in a critical problem's solution, Employees are decent and

neatly dressed, Employees are always able to retain the customer by proper behavior. These are the components which affect on overall service quality in banking industry and it gives gap between expectation and performance in terms of reliable parameter. Empathy is very important parameter of performance gap between customer aspects.

F4: Tangibility

This is the fourth most important factor explaining 9.106 % of the total variance. The scale reliability for this factor is 0.5 and loadings range from 0.649 to 0.411. The factors covered here are:

The services available in most of the banks are efficient and up to the quality mark, Bank provides quality services and maintains schedule as promised, Bank providing facilities like A.T.M., Debit Card, Credit Card, Mobile banking, Internet Banking, etc are convenient to the customers etc. These are the components which affect the overall service quality in banking industry and it gives gap between expectation and performance in terms of tangibles parameter. Tangible will cover some extra feature in current scenario as competition level in market is high, so apart from basic expectation banks should provide some other services also which cover tangibles parameters.

F5: Assurance

This is the fifth most important factor explaining 8.523% of the total variance. The scale reliability for this factor is 0.5 and loadings range from 0.627 to 0.546. The factors covered here are:

To make customer realize their safety, security, satisfaction and pleasure felt in their bank transaction, Equal treatment to all customers without any partiality by bank employees, Bank giving good services in reasonable time and minimum cost but not compensating with quality etc. These are the components which affect the overall service quality in banking industry and it gives gap between expectation and performance in terms of reliable assurance parameter. Assurance is very important parameter of expectation and performance gap between customer aspects.

F6: Reliability & Courtesy

This is the last but one of the most important factors explaining 6.428% of the total variance. The scale reliability for this factor is 0.5 and loadings range from 0.627 to 0.546. The factors covered here are - Bank employees are good in

understanding customer grievances and processes, Bank procedures and processes are without error (flawless), Bank employees are consistently generous and courteous, Bank Employees have the knowledge and caliber to answer customer's specific query and request etc. These are the components which affect the overall service quality in banking industry and it gives gap between expectation and performance in terms of reliable assurance parameter. Tangibility & Courtesy is very important parameter of expectation and performance gap between customer aspects.

DISCUSSION AND CONCLUSION

With the help of seven factors all hypotheses have been accepted. However, lack of sufficient research in India on this account, encouraged this research. The purpose of this study was to advance the understanding about service quality in public banks in India. This was done by assessing: (1) whether persons with different occupations differ in their perception and attributes about public banks, private bank & foreign bank in India; (2) whether persons from different age groups differ in their perception about performance of public banks in terms of total service quality. The results suggest that the highest factor affecting customer satisfaction is service quality. The bankers cannot afford the risk of losing "service quality". Further, the results are in tone with the finding of Triplett, Ted. (2009) who also suggests that ATM facility and fast cash deposit by card are very important aspects of service quality. From a customer satisfaction perspective, level of service provider and products is very essential for quality (Goyal, Parul, 2005).

The nature and frequency of studies in India concerning total service quality / customer service in banks is extremely limited. These limited studies of academicians and practitioners have reported very poor service quality mostly in public sector banks (Brahmanandam and Narayana, 1990; Elias, 1982; Nageshwar and Promod, 1990; Nageswar, 1987; Sesha Sai, 1999; Sundaram, 1984). The present study confirms such findings. However, it brings to light that poor service quality among Indian banks is mostly because of deficiency in tangibility and responsiveness. Public sector banks meet nearly 90% banking needs of the country and retail banking constitutes eighty percent of their total banking business. Investment in relevant banking technology particularly ATMs and internet facility will take care of most of their retail

banking Committee Report (1989) stressed mechanization of Indian banks. Many other researchers have suggested banking technology as a means to improve customer service.

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TOURISM TRENDS- A CASE STUDY OF INDIA

*Dr. Saurabh Dixit

ABSTRACT

Tourism is a highly changing phenomenon. It depends on many factors like: economic changes, political situation, social changes, environmental changes etc. There is change in tourist's traffic to Kedranath after 2013 incident. People were reluctant to travel to places affected by Tsunami after the incident. This paper is based on secondary data. ANOVA, Time Series are used to analyze data. Present paper is focused on tourism trends in India.

Keynotes: Tourism, Time Series.

INTRODUCTION

Tourism is a multifaceted activity. Tourism is an ancient phenomenon. We consider tourism as a business activity in modern context. That is why we are interested to find trends or pattern of tourism. Tourism industry is a multifaceted industry which besides the destination has three main sectors: Transport, Accommodation and Intermediary services. 'Tourism Products' are mainly services offered by these three sectors of the industry. The sales of all the above business are directly dependent on the overall turnover of tourism industry which in turn depends on the number of tourists and the money they spend. Also though these sectors of the industry are offering different products, they are closely interdependent on each other to turn the business smoothly.

For example, if travel agents and tour operators do the promotion, tourists are drawn to the destination, which will use the transport services and then accommodation and local services. So the promotion will benefit not only travel agents or tour operators but also transport and accommodation sector. If a destination does not have good transport services then the accommodation sector at the destination may not get sufficient business and vice-a-versa. Apart from interdependence of these main sectors on each other there are numerous other complex reasons which affect the trends in tourism industry. But mainly for marketing forecasting is required to work out the Product Design and to understand the demand for that particular product. In fact forecasting is a vital component in the decision making process for planning, organizing or marketing of tourism products and services.

Thus for tourism industry the important factors are numbers of travelers and type of travelers. You ought to know that at any given time in future what volume of tourists you expect and to how much you can cater. Once this overall scenario is predicted, then the individual organizations can work out their own marketing mix of '**Product, Price, Promotion and Place**' and **compete with each other for market share**. Hence, forecasting is needed to plan, develop and operate tourism facilities and services.

PATTERN OR TREND

Tourism trends can be ascertained with regard to many parameters. Market analysts researching in tourism trends facilitate a general layout of the trends with respect to outcomes of tourism which is inbound, use of information communication technology (I.T.) in the tourism and travel industry, tourism development and promoting tourism in many key areas like: tribal, medical farming, requirements, strategies development, tourism markets all over the world, promoting tourist attraction etc. (Harsseel Jan Van, 1994).

TOURISM TRENDS AND ECONOMY WORLDWIDE

Tourism sector is among the fastest growing sectors. Data suggests that the tourism industry in the global scenario makes up 11% of GDP. Tourism industry trends also suggest that as many as 200 million people are engaged worldwide in the tourism industry like: Travel, Banking. Statistical data opine that as many as 700 million people travel internationally every year. Several other industries which are in some way related to the tourism industry are doing pretty well. Technology has facilitated simplification of tasks. Importance of improving relationships with the neighboring countries, establishing newer and faster networks across the globe has taken the tourism industry to its peak. (Harsseel Jan Van, 1994) With tourist arrivals in the

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last six months up by 10% compared to last year, things are looking upbeat in the run-up to major events e.g. commonwealth games. Tourist arrivals have seen a major jump from 2008 that registered a negative growth of 9%. According to data collated by the ministry, foreign exchange earned by the country is increased by 28.1% in June 2010 over June 2009.

Foreign exchange earnings during January-June 2010 were \$6,842 million with a growth rate of 36.6% compared to \$5,007 million (in 2009). Foreign tourist arrivals in India during June 2010 were 3.70 lakh compared to 3.42 lakh during June 2009 and 0.34 million in June 2008. Foreign exchange earned in June 2010 was \$1,020 million compared to \$796 million in 2009.¹² Foreign tourist arrivals between January-June 2010 were 26.32 lakh compared to 23.76 lakh in the same period in 2009. (<http://www.economywatch.com/world-industries/tourism/trends.html> accessed on 25th Feb.'2011)

India expected to receive up to 5.5 million tourists in 2010, the highest number in any single year. However, tour operators and hoteliers were running the missed chance of marketing the first Commonwealth Games in India. They earlier complained that this number could have been higher, with the Games organized in October. (business-standard.com cited in <http://www.eturbonews.com/14523/india-expects-55-million-tourists-2010> accessed on 25th Feb.'2011)

In the year 2011, the arrivals are likely to increase by just about 200,000, based on conservative estimates, and 400,000 based on optimistic projections. "This year should be much better than the last two years. The positive thing is that conversions (inquires to actual bookings) have improved and people are booking six months in advance, which is a new trend," added *Thakur*. (business-standard.com cited in <http://www.eturbonews.com/14523/india-expects-55-million-tourists-2010> accessed on 25th Feb.'2011)

INFRASTRUCTURE GAP

Hoteliers expected a larger influx given the limited rooms in New Delhi.³ Foreign tourist arrivals (FTAs) in India during September 2010 grew 12.6 percent to 369,000 as compared to 3,28,000 during the month of September 2009 and 342,000 in September 2008, according to a report by Ministry of Tourism. Indian government has launched a scheme of visa on arrival (VoA) to attract more foreign tourists from January 2010 for citizens of Finland, Japan, Luxembourg, New

Zealand and Singapore. During the period January - September 2010, a total number of 4,493 VoAs were issued under this Scheme. Foreign exchange earnings (FEE) from tourism during the month of September 2010 were 46.78 billion rupees as compared to 37.98 billion rupees in September 2009 and 31.43 billion rupees in September 2008.

FEE growth rate in September 2010 was 23.2 percent as compared to growth rate of 20.8 percent in September 2009. In September 2009, foreigner arrivals decreased 4.1 percent compared to September 2008.

The growth rate in September 2010 is more than previous months August 2010, 9.0 percent, July 2010, 4.1 percent and June 2010, 8.0 percent.

FTAs during the period January-September 2010 showed a growth of 10.0 percent at 3.83 million as compared to the FTAs of 3.48 million and a negative growth rate of 7.4 percent during January-September 2009 over the corresponding period of 2008.

FEE during the period January-September 2010 were 461.15 billion rupees with a growth rate of 22.7 percent, as compared to FEE of 375.89 billion rupees with a growth of 3.1 percent during January -September 2009 over the corresponding period of 2008.

The number of visas issued under VoA scheme, during January-September 2010 for nationals of the five countries were Singapore (1,420), New Zealand (1,117), Japan (980), Finland (934) and Luxembourg (42).

Total numbers of VISA issued during September 2010 were 471 with country-wise breakup as Finland (48), Japan (166), New Zealand (148), Singapore (108) and Luxemburg (1). During the ninth month period of January-September 2010, the maximum number of VoAs were issued at Delhi airport (2397), followed by Mumbai (960), Chennai (905) and Kolkata (231). (<http://timesofindia.indiatimes.com/india/Tourist-arrivals-perk-up-in-last-six-months/article-show/6156827.cms>, Accessed on 25TH Feb.'2011)

There is growth in many new sectors in tourism. Seeing the remarkable growth in Medical Tourism Fortis Healthcare expects unexpected change in this form of tourism. It is expected that patient's inflow would be about 5,000. Arrival of patients from countries with advance medical system gives credence to the fact that country has got good infrastructure.¹⁷

PREDICTION

Prediction is also known as forecasting. It is essential to be able to predict futuristic developments in tourism and travel not only in the planning process but also while designing tourism products and services. A plan is worked out, based on certain assumptions. These assumptions are assumed on the basis of forecasting. Especially in marketing, to design a marketing plan accurate forecasting is very crucial. The forecast may predict certain behavior of customers or specific moves planned by competitors. One has to also consider government policies, general socio-economic scenario, legal, environmental changes which lead to particular trends. For example, the number of people travelling in specific destinations will change according to certain pattern. We know that more people are going to travel during vacation period (If we consider social trends). We know that in summer people from hot plains will want to escape to hill stations to enjoy cooler air (if we consider climatic seasonality).

VISA REGULATIONS

The visa regulation policies of government may affect the number of international tourists. The exchange rate will affect the number of inbound or outbound tourists. So, to understand the possible behavior of customers we have to consider various factors and make a forecast which will help in designing suitably accurate plans. Accordingly in high tourist season tourism industry should be ready to receive larger number of tourists, and in low season they should prepare for low sales turnover. Since the tourism products are various services, they have characteristics which make it difficult to stock the product. But the industry has to prepare itself for highs and lows of demand in various ways. So we can say that trends of tourism are essential for efficient planning by airlines, railways, hoteliers, tour operators, tourist transport operators, food and catering establishments, and other industries connected with or dependent on the hospitality and tourism markets. This paper familiarizes you with different variables in trend, different methods in trend and the importance of forecasting in tourism.

To predict tourism (demand), it is essential to understand various factors which will affect the number of travelers and the flow of travelers. Some of these factors are:

1) Social and Safety Factors

These factors are directly related to mental and physical security of the tourists. These factors also affect the trends of tourist flows. For example, the flow of tourists to the Kashmir valley has gone down whereas Himachal Pradesh has picked up. Certain social activities attract tourists. If there is a special social event like a festival, meet or a conference the tourists industry at the location should be ready to receive higher tourist inflows.

2) Politico- legal Environment

It is one important factor that affects the movements of tourist flows. Political conditions, the type of government and travel regulations (like visa, foreign exchange, etc.) affect the free movement of travelers. For example, China has very recently only encouraged inbound tourism. In India there are certain regions which are not open to tourists or one need a permit to enter those regions. In fact, the general political condition of a country to a great extent determines the inflow of tourists.

3) Geographical and Climatic Condition

Geographical and Climatic Condition decide the seasonality of flows, such as, tourist flow from areas of hot plains will go to hill stations in summer or tourists from colder countries will escape to sunny beach resorts during winter, etc. By making proper observations the forecasting of tourist arrivals can be made to undertake planning of additional tourist inflows.

4) The Economic Environment

It also affects the trends of tourist's flow-particularly from the tourist generating regions. Also the exchange rate between two currencies can alter the cost of holidays, thus, a holiday package may become cheaper or more expensive which also affects the tourist traffic.

5) Accessibility and Accommodation

Accessibility and Accommodation are the two basics of tourism. Any change in these, affects the tourist traffic tremendously. The change in frequency of transport services or beginning of

The World Tourism Organisation (WTO) issues tourism forecasts at a global level making productions in terms of tourist generating regions and destination regions. However, this exercise is completely ignored in the area of domestic tourism in India.

any new services is bound to affect tourist traffic along with the distance and time of travel. Long haul destinations face problem in this regard. In fact, a major drawback for India in the American and European markets is the long haul travel to India from these tourist generating regions. Similarly, availability and rates of accommodation will also make an impact on tourist flow.

6) New changes in tourism

New Developments in the Tourism Industry are many, such as setting up of a new attraction say an amusement park or any other theme park will definitely bring in more tourists. Opening of new destinations like "Sun City" in South Africa, Genting in Malaysia has lured lot of traffic from India. Basically forecasting could be of various durations, such as,

Short term	-	Seasonal
Medium term	-	Annual
Long term	-	More than 2-5 years

7) Human Resources

Young professionals change the scenario of tourism industry. There are more institutes and colleges in the country. People have opportunity to learn updated skills and study tourism as a separate specialization.

The methods used for tourism forecasting can be similar to methods used for forecasting of other products, but they have to be applied to suit the industry setup. They can be as follows:

a) Market tests

Market tests are conducted to understand demand pattern and scale of demand in the market. This can give definite clues of product design, pricing, etc. The advantage of this method is, it is very quick, and does not follow detailed technical analysis. But it may not be very reliable at times.

Survey can be conducted by Government organizations, or small private firms. These are very helpful in finding out the preferences of tourist and their impressions of various tourism services. Various surveys can be conducted for customers, sales force and experts to predict the requirement of quantity and quality of a product. The DOT carries out surveys through a team at departure lounges of international airports where tourists have already finished the visit to the country and have time to answer questions of surveyors. The airlines and hotels continuously take a

feedback from customers to understand their opinions which can be helpful in product design.

b) Time-series

History reveals future is the tagline for time series. By using historical data and sorting it on time basis, highs and lows of seasons can be better understood, especially tourism industry which is highly seasonal can benefit from such details. To promote sales figures in low season and prepare for onslaught of tourism in high season, this is necessary.

c) Correlation

This method can help in linking the tourist flows to certain variable factors such as per-capita incomes, etc. This is also vital in working out the marketing plan and mix product, price, place of distribution and promotion.

Different methods may give varied forecasts for the same period. So pragmatism is required in selecting the appropriate forecasting method, based on specific forecasting situation.

Relevance of forecasting and its applications for any marketing planning are important but it is more so for tourism because of the peculiar characteristics of the product. The product cannot be stocked, it is highly perishable. So only with the help of accurate forecasting marketing planning can be accurate.

We will discuss here various applications in the field of tourism.

Other aspects to be considered are pricing and quality. We see that with liberalization policy of our government the market trends in India are changing very fast. The main aspects of quality and pricing are following international norms; therefore, to complete effectively both these should be brought to global levels.

For an organization which is operating tours, various factors such as product designing, pricing methods and places of promotions should be planned out systematically. If a tour operator is selecting the sector of tour she/he has to think of popularity of that sector, number of competitors and then only take the decisions. At the same time forecasts regarding prospective buyers of the tour packages are essential for his business.

Tour operators offer special rebates for early bookers, lure customer with lucky draws etc. to survive in strong competition it has become necessary to understand the trends of product design, pricing and promotion. Also discount and

rebate norms should be well related to sales figures, otherwise organization may end up going into loss.

Forecasting pattern is also important for strategic activities of expansion, diversification and merger, etc. If these are worked out by accurate forecasting then they become successful otherwise the performance of the organization suffers.

Thus, forecasting has very varied applications from taking strategic decision, predicting sales, trends in product design styles, pricing and promotion. It can be used to work out the various details of sales budgets, etc. budgeting is always based on forecasting.

In tourism to fill up the minimum sales figures in low season, ingenious ways are worked out. The resorts and hotels offer very high discounts and special rates for conferences, seminars booked in non-season periods. It is seen that generally business tourism has comparatively less fluctuations compared to other areas so they can be used to make-up the gap.

Anticipating high influx of tourist in season various organizations plan in different ways. Transport operators have to run additional services, resorts, etc. make arrangements of temporary kind of accommodation such as tents, etc. which needs to be planned well in advance by projecting proper demand patterns.

Also most important aspects of application is projecting demand, the capacity of organization with regards service production and then

planning to get the targeted market share which is possible.

The forecasting should be evaluated on basis of historical data to come out with more accurate prediction. The projected figures should be checked with feedback to understand their accuracy.

Foreigners' visit (Duration)

Foreigners' visit to India is dependent on change in weather, global economic conditions and political stability. Following tables denotes month wise arrival of foreigners in India.

Table: 1.0 Tourist Arrival (In millions)

Year	Number of tourists	Domestic	Indians Going abroad	Share on India in world tourists arrival
2001	2.54	236.5	4.6	3.7
2002	2.38	269.6	4.9	3.4
2003	2.73	309	5.3	4.9
2004	3.37	367.6	6.2	4.4
2005	3.91	--	--	--
2006	4.44	--	--	--
2007	5.08	--	--	--
2008	5.36	--	--	--
2009	--	--	--	--
2010	--	---	---	---
2011	---	---	---	---

Source: http://www.pibbng.kar.nic.in/23_11_05_10.pdf accessed on 06th July'2011

Table 1.1: Duration of foreigners' visit in India

Month						%		change			
	2005	2006	2007	2008P	2009P	2005	2006	2007	2008	2009	
Jan	385977	459489	535631	591337	487262	9.85	10.33	10.54	10.4	-17.6	
Feb	369844	439090	501692	561393	501885	9.44	9.87	9.87	11.9	-10.6	
Mar	352094	391009	472494	541478	471627	8.99	8.79	9.3	14.6	-12.9	
Apr	248416	309208	350550	384203	370756	6.34	6.95	6.9	9.6	-3.5	
May	225394	255008	277017	300840	295124	5.75	5.73	5.45	8.6	-1.9	
June	246970	278370	310364	340159	340839	6.30	6.26	6.11	9.6	0.2	
July	307870	337332	399866	429456	--	7.86	7.59	7.87	7.4		
Aug	273856	304387	358446	391423	--	6.99	6.85	7.05	9.2		
Sept	257184	297891	301892	330874	--	6.56	6.70	5.94	9.6		
Oct	347757	391399	444564	452566	--	8.87	8.80	8.75	1.8		
Nov	423837	442413	532428	521247	--	10.82	9.95	10.48	-2.1		
Dec	479411	541571	596560	521990	--	12.23	12.18	11.74	-12.5		
Total	3918610	4447167	5081504	5366966	--	100.00	100.00	100.00			

P= Provisional

Source: Ministry of Tourism, Govt. of India

Duration of foreigners' visit

Foreigners' visit to India is dependent on change in weather, global economic conditions and political stability. Following tables denotes month wise arrival of foreigners in India.

Table 1.2: Duration of foreigners' visit in India

Month						%		Change			
	2005	2006	2007	2008P	2009P	2005	2006	2007	2008	2009	
Jan	385977	459489	535631	591337	487262	9.85	10.33	10.54	10.4	-17.6	
Feb	369844	439090	501692	561393	501885	9.44	9.87	9.87	11.9	-10.6	
Mar	352094	391009	472494	541478	471627	8.99	8.79	9.3	14.6	-12.9	
Apr	248416	309208	350550	384203	370756	6.34	6.95	6.9	9.6	-3.5	
May	225394	255008	277017	300840	295124	5.75	5.73	5.45	8.6	-1.9	
June	246970	278370	310364	340159	340839	6.30	6.26	6.11	9.6	0.2	
July	307870	337332	399866	429456	--	7.86	7.59	7.87	7.4		
Aug	273856	304387	358446	391423	--	6.99	6.85	7.05	9.2		
Sept	257184	297891	301892	330874	--	6.56	6.70	5.94	9.6		
Oct	347757	391399	444564	452566	--	8.87	8.80	8.75	1.8		
Nov	423837	442413	532428	521247	--	10.82	9.95	10.48	-2.1		
Dec	479411	541571	596560	521990	--	12.23	12.18	11.74	-12.5		
Total	3918610	4447167	5081504	5366966	--	100.00	100.00	100.00			

P= Provisional

Source: Ministry of Tourism, Govt. of India

56.3% increments were seen on comparing 2006 and 2007 in foreigner's tourists arrival in India and Finland secured first place. In India, maximum foreigners arrived in December (11.7%) and minimum tourists arrived in May (5.5%). Canada, China, France, Germany, Italy, Australia, Bangladesh, Japan, Korea, Malaysia, Netherland, Pakistan, Russia, Singapore, Spain, Srilanka, UK, USA contributed more than 1% in tourist's arrival in India in 2007. It is clear from the graph that tourist's arrival was affected by seasonality.

Table 1.3- Most recessive months and busy months of arrival in India from main 14 countries

	Nationality	Recessive month (%)	Busy month (%)
1	USA	Sep(4.69)	Dec.-13.9
2	UK	May (3.69)	Jan-12.67
3	Bangladesh	Sep(6.81)	Dec.-10.90
4	Canada	May (4.21)	Dec.-15.39
5	France	May-4.15	Feb.-11.21

6	Sri Lanka	May-5.89	Aug.-13.44
7	Germany	June-4.56	Nov.-12.06
8	Japan	May-5.86	Feb.-10.02
9	Australia	May-4.88	Dec.-15.40
10	Malaysia	July-5.87	Nov.-13.45
11	Pakistan	Sep.-4.42	Dec.-10.72
12	Italy	June-4.09	Aug.-12.87
13	Singapore	Sep-6.28	Nov.-12.98
14	China (main)	June-6.43	Dec.-11.17

Source: Immigration Bureau, India

It is visible from the above table that tourists' arrival was maximum in winter (31%, Oct.-Dec.) and minimum during summer (18.4%, April-June).

Dependent Variable: TOURISTS

Method: Least Squares

Sample: 158

Included observations: 58

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	691310.1	146502.6	4.718756	0.0000
R-squared	0.000000	Mean dependent var		691310.1
Adjusted R-squared	0.000000	S.D. dependent var		1115731.
S.E. of regression	1115731.	Akaike info criterion		30.70501
Sum squared resid	7.10E+13	Schwarz criterion		30.74053
Log likelihood	-889.4452	Durbin-Watson stat		2.003151

Sample: 1 58

Included observations: 58

Autocorrelation	Partial Correlation		AC	PAC	Q-Stat	Prob
. * .	. * .	1	-0.078	-0.078	0.3741	0.541
. * .	. * .	2	-0.078	-0.085	0.7533	0.686
. * .	. * .	3	-0.077	-0.091	1.1238	0.771
. * .	. * .	4	-0.069	-0.093	1.4323	0.839
. * .	. * .	5	-0.069	-0.102	1.7431	0.883
. * .	. * .	6	-0.073	-0.118	2.1019	0.910
. .	. * .	7	-0.051	-0.110	2.2789	0.943
. .	. * .	8	-0.050	-0.121	2.4501	0.964
. .	. * .	9	-0.052	-0.140	2.6448	0.977
. * .	. * .	10	-0.061	-0.172	2.9137	0.983
. * .	** .	11	-0.064	-0.211	3.2177	0.988
. * .	** .	12	-0.066	-0.271	3.5518	0.990
. *****	. *****	13	0.726	0.649	44.277	0.000
. * .	. .	14	-0.058	0.004	44.542	0.000
. * .	. .	15	-0.058	0.013	44.811	0.000
. .	. .	16	-0.057	0.021	45.076	0.000
. .	. .	17	-0.051	0.027	45.299	0.000
. .	. .	18	-0.051	0.038	45.528	0.000
. .	. .	19	-0.055	0.053	45.800	0.001
. .	. .	20	-0.035	0.011	45.913	0.001
. .	. .	21	-0.035	0.013	46.026	0.001
. .	. .	22	-0.037	0.015	46.160	0.002
. .	. .	23	-0.044	0.020	46.349	0.003
. .	. .	24	-0.046	0.023	46.570	0.004

ADF Test Statistic	-5.280797	1% Critical Value*	-3.5501
		5% Critical Value	-2.9137
		10% Critical Value	-2.5942

*MacKinnon critical values for rejection of hypothesis of a unit root.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(TOURISTS)

Method: Least Squares

Sample(adjusted): 3 58

Included observations: 56 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
TOURISTS(-1)	-1.028592	0.194780	-5.280797	0.0000
D(TOURISTS(-1))	0.023869	0.137406	0.173709	0.8628
C	722642.2	206443.4	3.500437	0.0010
R-squared	0.502512	Mean dependent var		-517.9464
Adjusted R-squared	0.483738	S.D. dependent var		1607577.
S.E. of regression	1155066.	Akaike info criterion		30.80930
Sum squared resid	7.07E+13	Schwarz criterion		30.91780
Log likelihood	-859.6603	F-statistic		26.76757
Durbin-Watson stat	2.002101	Prob(F-statistic)		0.000000

Test Equation:

Dependent Variable: RESID

Method: Least Squares

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	325.1310	149112.3	0.002180	0.9983
RESID(-1)	-0.003225	0.134922	-0.023903	0.9810
RESID(-2)	-0.023742	0.135079	-0.175766	0.8611
R-squared	0.000571	Mean dependent var		7.83E-11
Adjusted R-squared	-0.035772	S.D. dependent var		1115731.
S.E. of regression	1135511.	Akaike info criterion		30.77340
Sum squared resid	7.09E+13	Schwarz criterion		30.87998
Log likelihood	-889.4287	F-statistic		0.015711
Durbin-Watson stat	1.999311	Prob(F-statistic)		0.984416

						%	change			
Month	2005	2006	2007	2008P	2009P	2005	2006	2007	2008	2009
Jan	385977	459489	535631	591337	487262	9.85	10.33	10.54	10.4	-17.6
Feb	369844	439090	501692	561393	501885	9.44	9.87	9.87	11.9	-10.6
Mar	352094	391009	472494	541478	471627	8.99	8.79	9.3	14.6	-12.9
Apr	248416	309208	350550	384203	370756	6.34	6.95	6.9	9.6	-3.5
May	225394	255008	277017	300840	295124	5.75	5.73	5.45	8.6	-1.9
June	246970	278370	310364	340159	340839	6.3	6.26	6.11	9.6	0.2
July	307870	337332	399866	429456	--	7.86	7.59	7.87	7.4	--
Aug	273856	304387	358446	391423	--	6.99	6.85	7.05	9.2	--
Sept	257184	297891	301892	330874	--	6.56	6.7	5.94	9.6	--
Oct	347757	391399	444564	452566	--	8.87	8.8	8.75	1.8	--
Nov	423837	442413	532428	521247	--	10.82	9.95	10.48	-2.1	--
Dec	479411	541571	596560	521990	--	12.23	12.18	11.74	-12.5	--
Total	3918610	4447167	5081504	5366966	--	100	100	100		

						%	change			
Month	2005	2006	2007	2008P	2009P	2005	2006	2007	2008	2009
Jan	385977	459489	535631	591337	487262	9.85	10.33	10.54	10.4	-17.6
Feb	369844	439090	501692	561393	501885	9.44	9.87	9.87	11.9	-10.6
Mar	352094	391009	472494	541478	471627	8.99	8.79	9.3	14.6	-12.9
Apr	248416	309208	350550	384203	370756	6.34	6.95	6.9	9.6	-3.5
May	225394	255008	277017	300840	295124	5.75	5.73	5.45	8.6	-1.9
June	246970	278370	310364	340159	340839	6.3	6.26	6.11	9.6	0.2
July	307870	337332	399866	429456	--	7.86	7.59	7.87	7.4	--
Aug	273856	304387	358446	391423	--	6.99	6.85	7.05	9.2	--
Sept	257184	297891	301892	330874	--	6.56	6.7	5.94	9.6	--
Oct	347757	391399	444564	452566	--	8.87	8.8	8.75	1.8	--
Nov	423837	442413	532428	521247	--	10.82	9.95	10.48	-2.1	--
Dec	479411	541571	596560	521990	--	12.23	12.18	11.74	-12.5	--
Total	3918610	4447167	5081504	5366966	--	100	100	100		

**One way ANOVA
Notes**

Output Created		15-OCT-2009 17:54:50
Comments		
Input	Filter	<none>
	Weight	<none>
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	N of Rows in Working Data File	54
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics for each analysis are based on cases with no missing data for any variable in the analysis.
Syntax		ONEWAY tourists BY monthwise /STATISTICS DESCRIPTIVES HOMOGENEITY WELCH /PLOT MEANS /MISSING ANALYSIS /POSTHOC = T2 ALPHA(.05).
Resources	Elapsed Time	0:00:00.25

**Descriptive
Tourists**

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Jan	5	491939.2000	77607.62775	34707.18624	395576.6026	588301.7974	385977.0	591337.0
Feb	5	474780.8000	72880.19061	32593.01208	384288.0911	565273.5089	369844.0	561393.0
Mar	5	445740.4000	74693.93149	33404.14166	352995.6344	538485.1656	352094.0	541478.0
Apr	5	999626.6000	1513619.68295	676911.30063	-879780.4673	2879033.6673	248416.0	3705756
May	5	270676.6000	30998.89364	13863.12668	232186.3898	309166.8102	225394.0	300840.0
June	5	303340.4000	40657.80410	18182.72276	252857.0684	353823.7316	246970.0	340839.0
July	4	368631.0000	55817.65662	27908.82831	279812.6525	457449.3475	307870.0	429456.0
Aug	4	332028.0000	52832.07111	26416.03556	247960.3852	416095.6148	273856.0	391423.0
Sept	4	296960.2500	30317.65688	15158.82844	248718.0924	345202.4076	257184.0	330874.0
Oct	4	409071.5000	49068.91159	24534.45579	330991.9118	487151.0882	347757.0	452566.0
Nov	4	479981.2500	54824.18543	27412.09272	392743.7368	567218.7632	423837.0	532428.0
Dec	4	534883.0000	48621.51069	24310.75535	457515.3265	612250.6735	479411.0	596560.0
Total	54	455865.5556	461538.20068	62807.39380	329889.8770	581841.2342	225394.0	3705756

**Test of Homogeneity of Variances
Tourists**

Levene Statistic	df1	df2	Sig.
5.635	11	42	.000

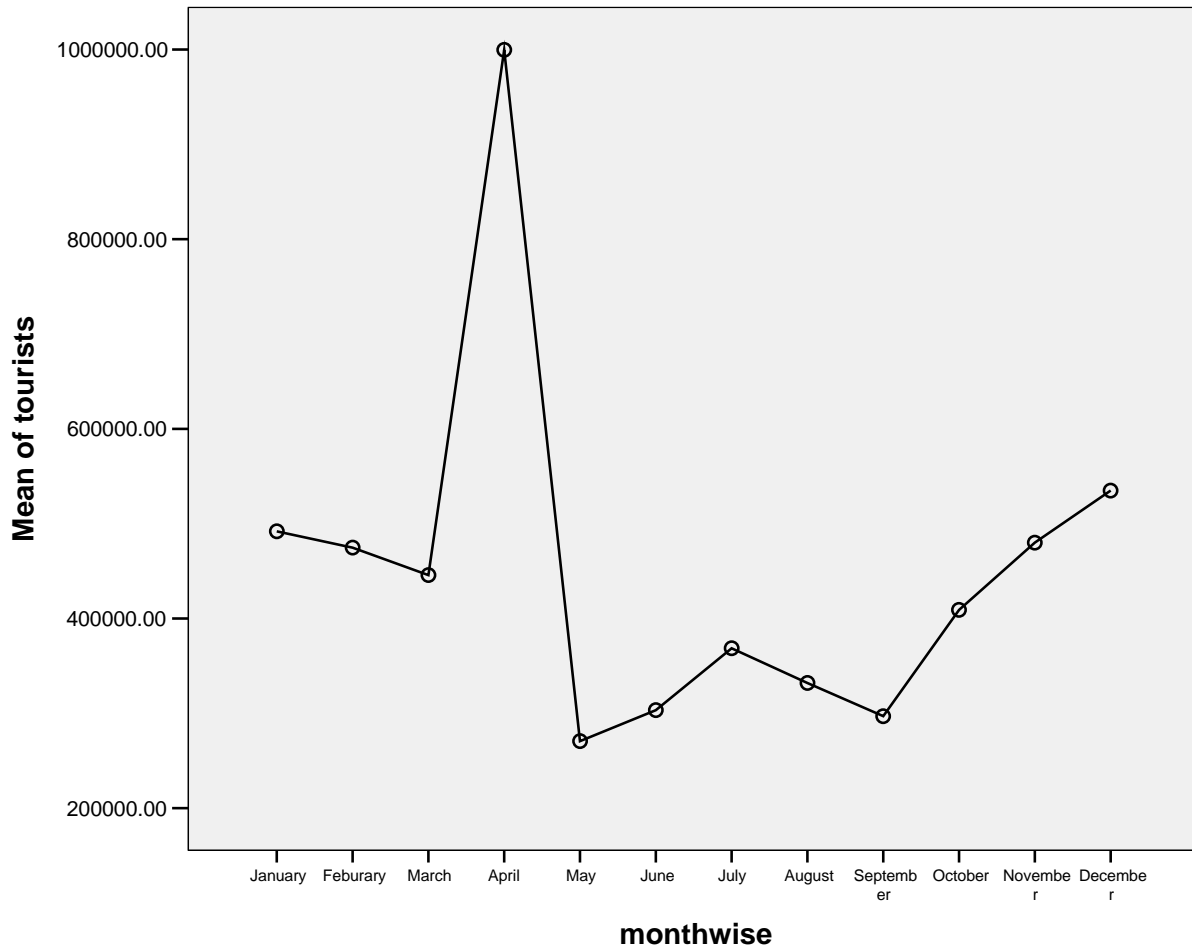
**ANOVA
Tourists**

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2003828837768.433	11	182166257978.949	.824	.617
Within Groups	9286099228694.890	42	221097600683.212		
Total	11289928066463.330	53			

Robust Tests of Equality of Means Tourists

	Statistic(a)	df1	df2	Sig.
Welch	11.484	11	16.148	.000

a Asymptotically F distributed.



1. The series has fifty (58) observations to test the first assumption of randomness of the observations auto-correlation is checked by using the method of serial co-relation/auto-correlation developed by durbin-waston in the form of D-W stat where if the value is 2 or near to 2 then there is no auto-correlation and data quality the first assumptions of randomness on which hypothesis testing can be done.

Result: Sample Size-58, Method : last square, D-W State Value - 2-003151

Analysis: The result shows that there is no auto-correlation.

2. Time Series data

For forecasting purpose & to see the volatility time series data is taken or generated for the present study the available data is time series data and to see the quality of data t-test is used with null hypothesis. HO: There is no time series data.

Results/Findings: T-Statistics- 4.718756, R-Square-0.00000

3. Standard error (S.E>) - Probability value to see the significance of null-hypothesis.

If probability value is less than 0.05 then null hypothesis Ho is rejected at 99% of level and 5% level of significance. The result gives probability value as 0 (zero) so alternate

hypothesis (H1) is accepted which explain time series data.

Heteroskedasticity: Since there is only variable so the problem of hetroskedasticity cannot or need not to be worried.

4. Patiala Correlation

The graph shows that there is unit root.

5. Unit root is tested to see the stationary of the series at 90% level of confidence, 95%, 99% level of confidence by Dickey-fuller test. The result shows

H0 says that there is unit root.

T-test value = - 5.280797 which is away from one trial test at 1%,5% & 10% significance of level it rejects that there is no unit root.

6. Seasonality of data

Residual show that there is seasonality in data

7. Standard error (SE) & significance

In the series while using the technique the value of standard error in AR (Auto regressive) and MA (Moving Average), value is under control and as per central limit theorem the t-test value is insignificant at 95% level of confidence.

ANOVA

While using ANOVA to see the various differences between tourist arrival in different month ANOVA is used.

The F-test value is 48.27 for different years and F value is 51.56 for different month with probability value less than 0.05 which is near to zero so result suggests that there is significant difference between tourist arrivals in different months.

Further, to make month -month analysis Post-hoc test is used (Tamhane's Test is used)

*Tanhane's Test, Welch, Mean plot homogeneity variance test

IMPACT OF PERIOD

It is observed that there is long term impact of seasonality of tourism business. It could be listed as:-

- Unemployment during lean season. Most of the tourist guides, handicraft workers are unemployed during lean season. Hence, their future is uncertain
- Low business volume.

- Unregulated tourists traffic is a cause of destruction of a place. *Manali, Shimla, Goa, Rajsthan* are not fully utilized in lean season and overcrowded in peak season.
- Difficult to plan. Once, Govt. of Goa issued an advisory that tourists should not visit the place because of no room availability.

LIMITATIONS

This study has few limitations also. These limitations are:-

1. Data of 2013, 2012 is not included , which may affect very short change cycle in the pattern.
2. Still, there is scope to consider logical indicators like: changes in the recession, economy of few countries.
3. Few factors like: political turmoil in Thailand are not in the scope of this study.

CONCLUSION

Main tourist trend in India is that tourist's arrival is good from October to March. There is lean season from April to September. The following measures can be taken to stretch this duration and attract tourists for longer period of time.

1. Development of special tourism to invite segmented/ targeted tourists round the year.
2. Development of few more less known attraction like: adventure, health etc.
3. Developing destinations like Auli, Manali, Dharmashala for winter tourist.
4. Development of new tourism products like grass ski-ing to keep on tourist traffic round the year.

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MARKETING CHANNELS

by Dinesh Kumar, foreword by Dr Jagdish N Seth.

Source: Oxford University Press, pp. 519, ISBN 0198077092.

Distribution is a crucial area and the backbone of Marketing. Product availability can make or mar well-thought out campaigns. Yet, most books available on Distribution pertain to developed markets, with some cases on developing countries added later on as an afterthought. It is thus refreshing to see a book written clearly with the Asian perspective. Professors of Marketing in India will like the book, *Marketing Channels*, which draws upon live examples and case studies to bring alive the challenges in designing and building competitive advantage through distribution channels. Besides covering the syllabi of MBA programs of universities, this book is a virtual powerhouse of information and cases that can easily be used in the classroom.

The book is divided into five sections: Roles and functions, Designing and operating, Managing, Controlling, and Modern marketing channels. Two topics are included that are not covered in other text books: Rural Distribution, and distribution in the digital age. These are going to be of immense interest to the reader and add topicality to the subject.

Each of the 16 chapters start and end with a case study. The case studies are of immediate interest to marketing professionals. Some of these cover different aspects of distribution of Tata Nano, Dabbawalas of Mumbai, Distribution of Luxury Goods, HUL's Project

Shakti, Amul, Dell, Big Bazaar, and distribution to bottom-of-the-pyramid markets. The questions for discussion at the end of each case give pointers to the instructor to guide the discussion in the classroom.

The book is well illustrated not only with graphs and charts, but also with photographs that the author has taken to illustrate different types of channels. The 16 color plates and the numerous black-and-white illustrations are sure to interest the reader.

The book is written in a friendly, easy-to-read style that immediately attracts the reader. It is a welcome addition to course books by Indian authors with an Indian perspective. Distribution is a crucial area, but is only taught as an elective in the final semester of the MBA course. Students thus do not realize the importance or the immense savings that can be affected by tweaking supply chains. Fortunately, this book helps bringing marketing channels out of the closet into focus.

Reviewed by
Prof. (Dr) Shivali Dhingra,
Director,
Amity Global Business School, Chandigarh

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