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Contents

- THE MAIN ASPECTS OF INNOVATIVE DEVELOPMENT REGIONS OF THE REPUBLIC OF UZBEKISTAN
Otajanov Umid Abdullaevich
- BLENDING ENVIRONMENTAL, SOCIAL AND GOVERNANCE (ESG) ASPECTS WITH TRADITIONAL INVESTMENT PRACTICES – AN EMERGING TREND IN PORTFOLIO MANAGEMENT
Dr. J.K. Singh
- A COMPARATIVE STUDY OF FINANCIAL EFFICIENCY OF PUBLIC AND PRIVATE SECTOR BANKS BASED ON FINANCIAL INNOVATION - DEA APPROACH
Arghya Sarkar, Prof. Raj Kumar
- SNS COMMUNICATION TOUCH POINTS: ENHANCING INDIAN CUSTOMERS' EXPERIENCE
Punita Duhan, Dr. Anurag Singh
- QUALITY OF WORK LIFE OF PRIVATE SECTOR BANKS EMPLOYEES: A DISCRIMINANT ANALYSIS
Dr. Barkha Gupta, Dr. Anukool Manish Hyde, Dr. Inderpreet Chhabra
- EMPIRICAL ASSET PRICING MODELS: AN OVERVIEW - Smita Datta, Anindita Chakraborty
- THE IMPACT OF PARTICIPATIVE LEADERSHIP STYLE ON JOB PERFORMANCE AND SELF EFFICACY
Poonam Sharma, Asha Rani
- INVESTIGATING FACTORS IMPACTING ADOPTION OF MOBILE SERVICES: AN INDIAN PERSPECTIVE
Arun Yadav, Dr. Ajai Pal Sharma
- AN ASSESSMENT OF CONSUMER BEHAVIOR TOWARDS GREEN HOTELS USING PERCEIVED VALUE MODEL
Dr. Smita Sharma, Shweta Sharma
- CONTENT ANALYSIS OF TOURISM WEBSITES: A COMPARATIVE STUDY OF PUBLIC AND PRIVATE TOURISM WEBSITES
Nitasha Sharma
- ENTREPRENEURIAL DEVELOPMENT IN MAKE IN INDIA ERA
Pratibha Giri

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SAARANSH is an international bi-annual refereed research journal published by RKGIT (MBA), Ghaziabad. The objective of the journal is to provide a forum for discussion of advancement in the area of management. The journal published research papers, articles, book reviews & case studies. The journal invites manuscripts on all aspects of management and business environment.

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FROM THE DESK OF THE EDITOR

The present issue carries eleven articles. The first article examines the main problems of the development of innovative activities of the regions of Uzbekistan. It focuses on the policy of the government of the republic on this issue, and suggests measures to further solve them and shows the possibility of using neural network technologies in modeling regional development based on classical, statistical and econometric methods.

Second article explores the relationship between the return offered by stocks in ESG portfolios in India and the return offered by broader market index, which is best reflected by NIFTY 500 and does not include many of such stocks which appear in the ESG portfolios.

Third article would like to compare the financial efficiencies of Public and Private Sector Banks with variables like – RTGS, M-Banking, ATM & POS and Output Variable – ROA, ROE & NIM.

Fourth article aim to study the influence of Performance Expectancy, Effort Expectancy, Social Influence and Facilitating Conditions on SNS embracement. The researchers undertook this study to look into factors influencing embracement of SNS in Indian context using UTAUT model.

Fifth article tries to discriminate the employees of Banks between High QWL perceiving employees and Low QWL perceiving employees by exploring the key factors which absolutely predict and discriminate High QWL and Low QWL perceiving employees.

Sixth article provides an overview of the two most popular empirical models – the Fama-French three factor model and the Carhart model and some recently developed ones – the alternative three factor model, the q-factor model and the Fama-French five factor model.

Seventh article focuses on to examine the impact of participative style on job performance and self-efficacy. The model has been tested in the service sector (call center's).

Eighth study laid down special emphasis on finding the factors that will help in accelerating early adoption and mass diffusion of mobile internet services with specific reference to Indian context and based on various theoretical models and studies regarding mobile internet adoption, this study postulates that behaviour intention to adopt mobile internet is influenced by several independent factors.

Ninth article utilizes the perceived value based on the variables of price, quality and accessibility to analyze the perceived value and its effect on consumer perception.

Tenth article is an attempt to compare the content provided by Private and Public tourism websites based on four categories namely Informational, Communicational, Transactional and Website Management.

Eleventh article attempts to analyse the recent initiatives taken by the Government with regards to Industrialization and Urbanization, ease of doing business and the Make in India campaign and its role in economic development and employment generation of the country.

We hope it will be useful for the readers to better understand the modern dynamic India & volatile Business world. Moreover, I am thankful to all the authors for contributing their research work & express my heartiest gratitude for their valuable support and with expectation of your patronage in future.

–Dr Vibhuti

EXPERT'S-COMMENTS for “SAARANSH” RKG Journal of Management

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✍ *'The journal is overall an excellent attempt'*

CONTENTS

- THE MAIN ASPECTS OF INNOVATIVE DEVELOPMENT REGIONS OF THE REPUBLIC OF UZBEKISTAN 1
Otajanov Umid Abdullaevich
- BLENDING ENVIRONMENTAL, SOCIAL AND GOVERNANCE (ESG) ASPECTS WITH TRADITIONAL INVESTMENT PRACTICES – AN EMERGING TREND IN PORTFOLIO MANAGEMENT 8
Dr. J.K. Singh
- A COMPARATIVE STUDY OF FINANCIAL EFFICIENCY OF PUBLIC AND PRIVATE SECTOR BANKS BASED ON FINANCIAL INNOVATION - DEA APPROACH 12
Arghya Sarkar, Prof. Raj Kumar
- SNS COMMUNICATION TOUCH POINTS: ENHANCING INDIAN CUSTOMERS' EXPERIENCE 20
Punita Duhan, Dr. Anurag Singh
- QUALITY OF WORK LIFE OF PRIVATE SECTOR BANKS EMPLOYEES: A DISCRIMINANT ANALYSIS 31
Dr. Barkha Gupta, Dr. Anukool Manish Hyde, Dr. Inderpreet Chhabra
- EMPIRICAL ASSET PRICING MODELS: AN OVERVIEW 38
Smita Datta, Anindita Chakraborty
- THE IMPACT OF PARTICIPATIVE LEADERSHIP STYLE ON JOB PERFORMANCE AND SELF EFFICACY 47
Poonam Sharma, Asha Rani
- INVESTIGATING FACTORS IMPACTING ADOPTION OF MOBILE SERVICES: AN INDIAN PERSPECTIVE 53
Arun Yadav, Dr. Ajai Pal Sharma
- AN ASSESSMENT OF CONSUMER BEHAVIOR TOWARDS GREEN HOTELS USING PERCEIVED VALUE MODEL 64
Dr. Smita Sharma, Shweta Sharma
- CONTENT ANALYSIS OF TOURISM WEBSITES: A COMPARATIVE STUDY OF PUBLIC AND PRIVATE TOURISM WEBSITES 68
Nitasha Sharma,
- ENTREPRENEURIAL DEVELOPMENT IN MAKE IN INDIA ERA 83
Pratibha Giri

The Main Aspects of Innovative Development Regions of the Republic of Uzbekistan

Otajanov Umid Abdullaevich¹

ABSTRACT

The article considers the main problems of the development of innovative activities of the regions of Uzbekistan, focuses on the policy of the government of the republic on this issue, and suggests measures to further solve them, shows the possibility of using neural network technologies in modeling regional development based on classical statistical and econometric methods.

Keywords: innovation, innovation, investment, investors, information and communication technologies, infrastructure, competitiveness, modeling, forecasting, neural networks, neural network technologies.

INTRODUCTION

The development of the innovation sphere, the intensification of innovation activities are an important priority for the development of Uzbekistan in the coming decades. The globalization of the world economy, the intensification of competition in the main markets of advanced technologies require from domestic enterprises a radical modernization of the existing production system and the transition to new technologies.

The Government of the Republic of Uzbekistan pays great attention to these issues.

Support for innovative investment activities should be carried out by the state. Annex No. 1 to the Decree of the President of the Republic of Uzbekistan of February 7, 2017 No. UP-4947 states that it is necessary: “to pursue an active investment policy aimed at upgrading, technical and technological renewal of production, implementation of industrial, transport and communication and social infrastructure projects” (2017). In addition, it is necessary to “comprehensive and balanced socio-economic development of regions, districts and cities, actively attracting foreign investment in sectors of the economy and regions of the country by improving the investment climate” (2017).

The strategy of action in the five priority areas of development of the Republic of Uzbekistan in 2017–2021 provides for “improving the investment climate, actively attracting foreign, primarily foreign direct investment, into sectors of the economy and regions of the country” (2017).

The various government documents identify the main areas of investment policy of the republic, providing for a set of measures to strengthen the positive growth trends of investments, to attract investment resources to the republic, to increase their efficiency, which contributes to the creation of a highly efficient economic base and a developed social sphere that ensures a high standard of living.

Of all the republics of Central Asia, Uzbekistan is the leader in both investment potential and investment risk. The fundamental task of developing investment processes in the republic is to create a favorable investment climate for attracting domestic and foreign investments.

LITERATURE REVIEW

In the scientific literature (Atoyan V.R., 2006), questions of the feasibility of the formation of the innovation potential in economic systems of various levels of complexity are considered in relation to the opportunities of the educational, scientific and innovative sphere, the level of development of which largely determines its size and the degree of its involvement in the real economy. Today we are talking about the innovation infrastructure as a combination of various enterprises and organizations, which, on the one hand, provide the scientific and technical development of the region, and on the other hand, implement the planned indicators in the practical field.

One of the important issues in the complex socio-economic development of the region is the

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formation of its innovative environment, and therefore, it is necessary to form an innovative development strategy not only at the regional level, but also at the local levels (Guriev L.K., 2003). The development of the region on the basis of innovation is the most important factor in its competitiveness. M. Porter considers the innovative potential and innovativeness of the regional economy as the most important competitive advantage. In a broader sense, the competitiveness of a region can be represented as a set of stable relations in the field of socio-economic development of the region in cooperation with other regions, which allow creating new combinations of products, industries and spheres of economic activity. These combinations, in turn, are aimed at the formation and promotion of innovative products and new activities for the region, thus ensuring its innovative leadership and competitiveness.

Innovation activity is traditionally associated with a high level of risk: according to statistics, only 10% of all implemented developments have commercial success (Gorbachev A.V.&Starostin A.A., 2004).

Therefore, first of all, at the level of regional and municipal authorities, it is necessary to create and maintain a system for managing the commercialization of R & D products, oriented to work in market conditions. Such a system will allow uncovering and stimulating the development of the potential of Russian scientific organizations and at the same time contribute to bringing the economy to a qualitatively new level.

At the micro level, innovation activity is carried out through appropriate innovative projects. An innovative project is a complex system of interdependent and interconnected resources, deadlines and implementers of activities aimed at achieving specific goals in priority areas of science and technology (Gorbachev A.V. & Starostin A.A., 2004).

MAIN PART

Innovative development of any region is its ability to self-renew, adapt to changes and generate products of scientific and technological progress. World experience shows that the sustainable development of production and maintaining its competitiveness in the long term depends not only on resource capabilities, but more on innovation.

When forming a model of a national innovation system, immanent problems arise in developing the conceptual foundations of the innovation strategy of regions. It is proposed to consider the tasks, conditions, levers and mechanisms, consideration of which is necessary when developing a regional model of innovative development (Guriev L.K., 2003).

One of the important issues in the complex socio-economic development of the region is the formation of its innovative environment, and therefore, it is necessary to form an innovative development strategy not only at the regional level, but also at the local levels. Regional development based on innovation is the most important factor for its competitiveness.

Among the objectives of the region, which determine the features of strategic management of innovations, we can highlight the expanded reproduction of regional intellectual resources, the development of regional innovation infrastructure and the creation of favorable conditions for innovation activities. First of all, this impact is through the personnel component and the education system. The developed university and scientific sector of the region serves as the most important intellectual prerequisite for raising the level of innovative potential.

The modern economy is characterized by dynamism and instability of the processes occurring in the market. The economy of the transformation period, both in Uzbekistan and other countries that have taken the path of market transformation, is characterized by a high level of instability associated with the constant change not only in volume, but also in the direction of development. The effectiveness of the functioning of both the national economic system and its regions depends on how effectively the innovative transformations are carried out. An important aspect of the innovation development of the regions is the identification and elimination of problems that hinder the pace of this development.

The distribution of investments by industry in the republic in recent years shows the minimum amount of investment in the information sector. However, information and communication technologies are becoming increasingly important for the formation of information resources and their use in the management of the socio-economic development of the country. Currently, a regulatory

framework is being created, information technologies are being introduced in all spheres of public life and the economy. Information and communication technologies have a huge impact on almost all aspects of life.

The main problems of informatization development in the republic include: territorial extent, insufficient development of information and communication resources, lack of trained personnel and a number of other reasons.

For the accelerated development of the information sector in the region, there are such obstacles as:

- a formalized approach to the problem of informatization of the regional economy and the creation of an innovative sector of the economy;
- lack of personnel in the field of information systems and technologies at the modern level;
- insufficient funding from the state;
- Insufficient capital inflows to business and a number of others.

The solution of these problems in the economy of the republic and the creation of conditions for the formation of the information society presupposes an active state policy with respect to the information sector of the economy, which includes, first of all, the investment policy. In this regard, it became necessary to develop an investment strategy. The main thing, in our opinion, is an integrated approach to the consideration of specific territorial forms of location of the information sector.

As world experience shows, the most dynamic development is received by those regions where a regional innovation infrastructure is being formed, which covers educational and scientific institutions, enterprises, research centers, government bodies, financial institutions. Thus, to ensure the innovation development of the regions, it is necessary to formulate and legally fix the state policy of regional development, coordinate the development of specific regions taking into account the priority directions of innovation activity, as well as implement measures for the formation of a regional innovation infrastructure.

In general, an infrastructure is a system that can consist of the following subsystems:

- scientific, technical and innovation subsystem,

providing scientific support of management processes;

- investment and financial institutions, including enterprises of the venture industry;
- business enterprises and organizations;
- information network;
- Specialized innovation structures (business parks and business incubators, innovation centers, etc.);
- sphere of investment and innovative services;
- specialized funds (Osaulenko A.I., 2003).

For short-term forecasting of foreign investment in the region's economy and their further optimal distribution by economic activity in order to provide an additional maximum gross regional product, it is necessary to use a set of mathematical models of neural network modeling and dynamic programming.

In strategic management among the methods of forecasting the development of regions, the program-target method, the balance method, the methods of expert estimates, extrapolation, econometric modeling, the normative method are widely used. However, in solving the problems of regional forecasting and modeling, scientific and technical advances created by the development of information technologies and based on the use of artificial neural networks (INS) are poorly used. Neural networks give the best results in comparison with other methods precisely when connections in the system are difficult to trace and cannot be analyzed, their number is too large in volume.

Based on the study of the main strategic documents for the development of branches of the regional level of the republic, it is necessary to form a system of indicators that comprehensively characterize the current state of the branches of the national economy. In general, the information base should be organized in accordance with the basic requirement for the information system of macroeconomic forecasting - it is necessary to cover and reflect all branches of the territory's economy in terms of the minimum number of aggregates, and describe the structure of the economic, social and financial complexes of the region.

For the training of the neural network, you can use the quasi-Newtonian algorithm BFGS. In

Statistica 10.0 there is a hardware implementation of this algorithm, so the calculation can be made in its statistical package Neural Networks (Neural networks, 2000). The scheme of neural network modeling of regional development is shown in Figure 1.

An increase in the use of resources will require, first of all, financial support and labor resources, as a result of these processes there will be an increase in the revenue part of the budget and

foreign trade turnover. To assess the reliability of the results obtained, one can use classical statistical and econometric methods.

Neural network technologies will allow solving poorly formalized problems of managing complex dynamic objects when models and algorithms are not adequate to the real state of the controlled process. Neural networks allow us to establish dependencies between indicators of interest (input and output) without explicitly specifying the type

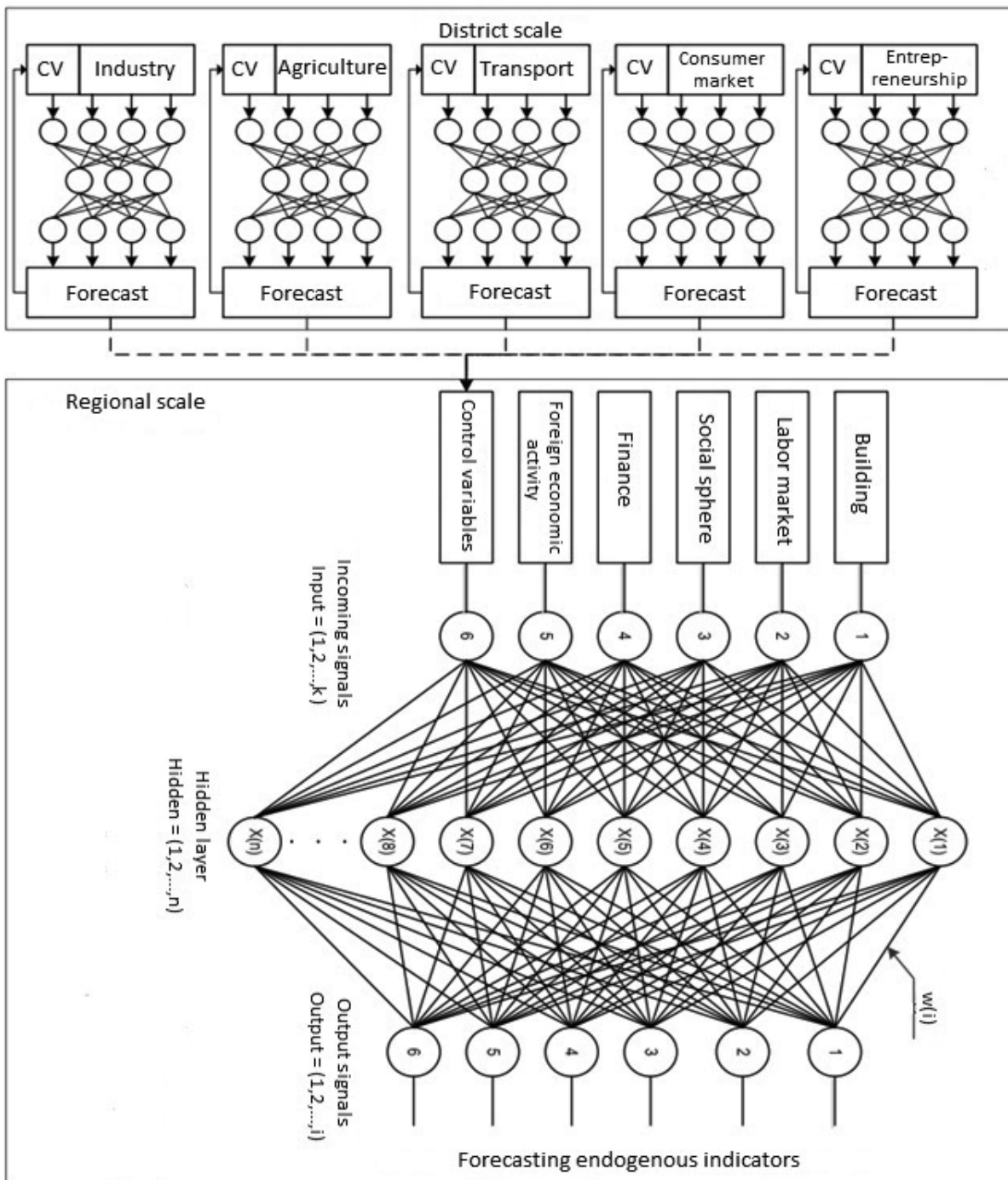


Fig. 1. Scheme of neural network forecasting of regional development [11].

of these dependencies. Potential applications of artificial neural networks are viewed in those tasks when, due to uncertainty, for example, due to lack of information, traditional solutions are not effective, and conventional calculations are very laborious.

ANALYSIS AND RESULTS

Innovative development of the region requires the implementation of at least two innovative conditions: the transfer of authority from the national to the regional (local) levels of government and the implementation of tasks to promote and stimulate the development of state, public and private organizations in the region (Gorbachev A.V. & Starostin A.A., 2004).

The application of individual measures aimed at improving the process of attracting investment in the region will not give adequate results. We need a systematic management approach to solving the problem on the basis of developing and implementing a state investment policy aimed at restoring the processes of expanded reproduction and targeting the regions to economic self-sufficiency. The strategic goal of state investment policy in modern conditions should be the formation of a mechanism for innovative investment activity through the creation, for example, of regional investment funds that are adequate to the emerging market environment and fit into the emerging and developing market institutions.

A special role in the structure of the organizational and economic management mechanism belongs to regional and municipal governments, since not only the efficiency of the innovation and investment policy developed and implemented, but also the vector of the socioeconomic region as a whole depends on their competence.

In addition, any type of innovation needs government support. In developed countries, specific ways and forms of state support for innovative entrepreneurship have been developed. Within this direction, three broad categories of innovation policy methods can be distinguished: methods of stimulating the supply of innovations (providing financial and technical assistance to innovators, including the creation of a scientific and technical infrastructure); methods of stimulating demand for innovation (government procurement and contracts, especially for new

products, processes and services); climate creation methods for innovations (including tax and patent policies and state norms and rules that regulate the state of the economy, the conditions and safety of work and environmental protection) (Tarasenko T.V., 2007).

To ensure the innovative development of the regions, it is necessary to eliminate the above problems with the help of:

- Creating favorable conditions for the formation of an effective regional innovation infrastructure that would provide financial, informational, consulting, marketing and other types of support for innovation processes;
- Formation and legislative consolidation of the state policy of innovative development of regions, as well as the development of a program of innovative development of specific regions, taking into account the priority directions of innovation activity;
- Introducing new motivational mechanisms of the innovation process, ensuring its commercialization, focusing on meeting market demand.

Thus, the allocated infrastructural, regional and state-management problems impede the innovative development of the regions. Comprehensive implementation of the proposed activities will not only coordinate the activities of regional authorities to implement innovation development programs, but also create a regional innovation infrastructure that organizes and optimizes communication between the subjects of innovation activity and also provides direct participants in the innovation process with the necessary resources as soon as possible. All this will ensure optimal rates of innovation development of the regions, which in turn will increase the efficiency of functioning of both the regional economic system and the entire national economic system as a whole.

CONCLUSION AND RECOMMENDATIONS

The main priorities of innovation development for each region are aimed at creating an effective innovation system in the region, increasing the innovation activity of enterprises and institutions, increasing the share of innovation products and services, innovative renewal of fixed assets, and



as a result increasing labor productivity, training personnel for the innovation sphere.

Uzbekistan has a rather high innovation potential, which is determined primarily by a high concentration of educational and research institutions. The infrastructure of innovation begins to form.

At the same time, the effectiveness of the practical use of the scientific, technical and educational potential of the republic is clearly insufficient, and the formation of the innovation infrastructure is still only at the initial stage. The analysis showed that in recent times there has been a noticeable decline in indicators of innovation activity.

All this testifies to extremely low innovation activity of enterprises, which is due on the one hand to a lack of investment resources, on the other hand to uncertainty in terms of implementation in the market (changing conditions, reducing government orders, etc., the uncertainty of contractual obligations).

Thus, an extremely unfavorable situation in the innovation sphere is emerging, and without a targeted innovation policy it is impossible to overcome the current trends of stagnation and decay. In this regard, the development of an innovative development strategy for the region in the long term, which will contribute to the formation and effective use of the innovation potential, acquires particular relevance.

In this regard, the main task of the regional innovation development strategy is the harmonious and coordinated development of the regional innovation system, providing a full cycle of innovations from the development of innovation to its implementation. This is ensured within the framework of the optimal structure of the regional innovation system.

Thus, the informatization of the economy and society and the strategy of creating a national innovation system, the core of which is the national information system, require an integrated, systematic, program-oriented approach. The information sector of the republic's economy is in a state of development. Information and communication technologies are becoming increasingly important for the formation of information resources and their use in managing the socio-economic development of the republic. In this connection, one of the main directions of the investment development strategy should be the improvement of information technologies for the functioning of government bodies and social institutions.

For short-term forecasting of foreign investment in the region's economy and their further optimal distribution by economic activity in order to provide an additional maximum gross regional product, it is necessary to use a set of mathematical models of neural network modeling and dynamic programming.

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Blending Environmental, Social and Governance (ESG) Aspects with Traditional Investment Practices – An Emerging Trend in Portfolio Management

Dr. J.K. Singh*

ABSTRACT

Investment pattern and behavior in the equity market over last few years has tremendously changed in the light of new emerging industries and increasing social awareness. Besides the financial information of any company, the contribution of the companies towards improvement in environment, governance and social aspects are also factored in before taking a call on investment. It is expected that the companies which are addressing the issues of Environment, Social and Governance besides generating profit at reasonable rate would be valued more and likely to find place in portfolios of larger investor community. The present study aims to examine the performance of such companies in India, in term of generating return, as compared to the return generated by the broader market index NIFTY 500. Statistical test such as K-S test, Levene's statistic, t-test, etc have been employed using SPSS (Statistical Package for Social Sciences) and appropriate conclusions have been drawn using the output of various tests.

Keywords: Portfolio Management, ESG, Socially responsible investing (SRI), K-S test, Levene's Statistic, t-test, NIFTY 500, Corporate Social responsibility

INTRODUCTION

Equity market, all over the world, has always been an important area of investment as well as research. Over the last few decades, significant changes have occurred in the equity market and investment markets related to it. Investment community has always explored to find ways and means to minimize their risk and maximize their returns at a given level of risk. One of the well known strategy has always been to allocate investment funds among different securities i.e. creation of portfolio of securities. The portfolio once constituted needs to be revised as well from time to time through exclusion and inclusion of securities. The job is best executed by portfolio managers of funds. Portfolio managers are therefore expected to analyse the business environment keeping in view the future scenario and accordingly select securities for investment. In the recent past, the concept of Corporate Social responsibility has gained significant importance and the role of companies in directly discharging their duties for societies is also being considered as important parameter for valuation of companies. Portfolio Managers are of the opinion that social

and environmental issues can be material to the financial outlook of investments due to increasing awareness among the society at large. As a result of this, the investment considerations in equity market also focuses on the environmental, social and governance (ESG) as part of their decision-making processes.

The term ESG comprises the following dimensions:

- i) Environmental which includes resource-depletion, renewable energy, clean-technology, pollution, climate-change, etc.
- ii) Social issues give cognizance to human rights, workplace-conditions, discrimination, community-relations, etc.
- iii) Governance issues deal with compliance, transparent reporting, managing conflicts, etc.

It has been a concern among the investors community that a company focusing on intangible issues such as environmental, social and governance may not fully devote itself to its main operations and therefore their financial performance may be compromised while addressing these issues. The study aims to

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examine if the concern being developed among the investor community in India is correct or not.

REVIEW OF EXISTING LITERATURE

The literature on ESG portfolio is limited as the concept has evolved in the recent past. However, the contribution of some of the researchers in this area is very informative and provides good framework for further research. Roger Schillerstrom, in the editorial section of Pension and Investment dated September 18, 2017, discussed merits of including environment, social and governance issues in investment decision making process. The research highlighted that inclusion of such issues does affect the returns rather helps in minimizing the risk of investment in portfolio constituted of such securities. Emiel, Auke and Bert (2016) found that many conventional managers are moving towards integration of responsible investing in their investment process. Capelle-Blancard and Monjon (2012) observed that most of the socially responsible investing literature has finally arrived at conclusion that the impact on financial performance is limited and not statistically significant. Later on, Humphrey and Tan (2014), confirm this conclusion with the latest data. Sandra A Waddock, Samuel B. Graves and Renée Gorski (2000) observed that socially responsible investment is a growing movement and attempted to measure social performance.

OBJECTIVE OF THE STUDY

In contrast to traditional investment style where financial return used to be the main consideration for the investment in stock of any companies, nowadays, the issues of governance, environmental and social finds important place as one intends to include these objectives as well besides generating reasonable return on their investment. Portfolio managers, in the recent years, prefer to invest in stocks of companies which complies with the aforesaid issues. The present study aims to study relationship between the return offered by stocks in ESG portfolios in India and the return offered by broader market index, which is best reflected by NIFTY 500 and does not include many of such stocks which appear in the ESG portfolios.

RESEARCH METHODOLOGY

The returns generated by the stocks in the ESG Portfolio of SBI Magnum Equity ESG Fund over last three years i.e. October 2015 to October 2018 have been calculated and compared against the return generated by the Nifty 500 index. The study test the null hypothesis that there is no significant difference between return of stocks and return of NIFTY 500 index.

i.e.	
H_0	: Mean _{Return on stocks} = Mean _{Return on NIFTY 500 (Null Hypothesis)}
H_a	: Mean _{Return on stocks} \neq Mean _{Return on NIFTY 500 (Null Hypothesis)}

The statistical test, namely t-test, has been employed for the study using SPSS after ensuring compliance of necessary conditions required for the same. It has been ensured that the samples are independent of each other because the stocks of ESG Portfolio are not included in the NIFTY 500 index. Thus, the conditions with regard to independence of the two samples under the study have been met. The other conditions such as normality of the data and homogeneity of variance have been examined using Kolmogorov Smirnov test and Levene's test respectively. Finally, t –test has been conducted on the sample and meaningful interpretations were made.

Analysis and Interpretation of Data under study

The data used for the study has been collected from the website of the National Stock Exchange and it is summarized below in table 1.

Table 1: Return of stocks in SBI Magnum ESG Portfolio fund and Return on NIFTY 500 index

S. No.	Name of Companies in ESG portfolio	Return generated by stocks of companies	Return generated by NIFTY 500 index	Excess / Deficit return over index
1	Reliance Industries Ltd.	148.0237	43.6	104.4237
2	HDFC Bank Ltd.	90.40968	43.6	46.80968
3	Infosys Ltd.	31.34058	43.6	-12.2594
4	Kotak Mahindra Bank Ltd.	79.91453	43.6	36.31453
5	Mahindra & Mahindra Ltd.	56.68277	43.6	13.08277
6	Tata Consultancy Services Ltd.	77.0017	43.6	33.4017
7	Larsen & Toubro Ltd.	62.87425	43.6	19.27425
8	Bajaj Finance Ltd.	329.7521	43.6	286.1521
9	Axis Bank Ltd.	45.73991	43.6	2.13991
10	ICICI Bank Ltd.	39.74895	43.6	-3.85105

It can be observed from the above table that some of the stocks in the ESG Portfolio of SBI Magnum



Equity ESG Fund have generated significantly higher returns in the last three years as against the return generated by the NIFTY 500 index during the same period. In some of the cases, the return of stock happens to be less than the return generated by the index under study. Thus, it becomes necessary examine if there has been statistically significant difference between the returns of stocks in ESG portfolio and the return of NIFTY 500 index.

In order execute, t – test, on the above data, the condition of normality of the data was examined using Kolmogorov Smirnov test with the help of SPSS, and the output of the same is given below in table 2:

Table 2: Normality test for the sample under study

One-Sample Kolmogorov-Smirnov Test			
N		Return on	Return on
		Nifty 500	stocks
		10	10
Normal Parameters ^{a,b}	Mean	43.6000	96.1488
	Std. Deviation	.00000 ^c	88.51331
Most Extreme Differences	Absolute		.326
	Positive		.326
	Negative		-.232
Kolmogorov-Smirnov Z			1.030
Asymp. Sig. (2-tailed)			.239

a. Test distribution is Normal.
b. Calculated from data.

It can be observed from the output of the KS test that p-value is greater than 0.05 (level of significance used for the study), therefore it implies that the given data complies with the condition of normality.

After ensuring the normality of data, the given samples were subject to t-test using SPSS and the output obtained from the same is shown below in table 3:

Table 3: SPSS output for Group Statistic of the samples under study

Group Statistics	N	Mean	Std. Deviation	Std. Error Mean
mean Return on Index	10	43.6000	.00000	.00000
Return on Stock	10	96.1470	88.51288	27.99023

The group statistics of the output highlight the mean return of the stocks and the index along with their standard deviation. The mean return of the stocks has been observed as 96.14% as against 43.16% of the NIFTY 500 and the standard deviation of the stock return is 88.51. Prima facie, the mean return of the stocks in ESG portfolio appeared to be significantly higher than the return of the NIFTY 500 index.

The t-test output (as shown in table 4) generated using SPSS contains Levene's statistic which is used for examining if the independent samples under study have equal variances or not. The p-value of the Levene's test in the above case is 0.012 which is lower than 0.05. This indicates that the null hypothesis i.e. there is no significant difference in the variances of the two samples, stands reject. In other words there is significant difference in the variances of the two samples and this is, to some extent, visible in the group statistics table 3. Based on the above analysis, we focus on the top row of the above output for further analysis. The p-value in the top row is 0.077 which is greater than 0.05. Therefore, we accept the null hypothesis that there is no significant difference between the return offered by stocks in ESG portfolio and the broader market index under study (NIFTY 500).

Table 4: SPSS output for t-test

Independent Samples Test		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower		Upper
Return	Equal variances assumed	7.739	0.012	-1.877	18	0.077	-52.547	27.99023	-111.352	6.25829
	Equal variances not assumed			-1.877	9	0.093	-52.547	27.99023	-115.865	10.7713

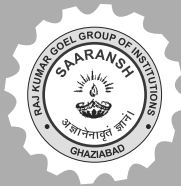
CONCLUSION OF THE STUDY

The traditional investment practice of focusing solely on the financial performance of companies is undergoing change and gradually the concept of Social Responsible investing through integration of ESG in portfolio management is picking up. The study reveals that the stocks in the ESG portfolio in no way offers less return than broader market index return which helps in removing the

misconception from the minds of several investors that the additional responsibility of companies in meeting Environmental, Social and Governance issues may lead to comprise their financial returns. With the increasing awareness among the general public and society at large, the companies complying with ESG norms would become more favourable destination for portfolio manager and help in minimizing risk of investment in securities.

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A Comparative Study of Financial Efficiency of Public and Private Sector Banks based on Financial Innovation - DEA Approach

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Prof. Raj Kumar**

ABSTRACT

In Indian banking system RBI is the central bank who licenses institutions to carry out banking business. The banking model in India has undergone many changes since the British era. After witnessing many significant changes Indian banking system is at its matured stage. At present the combination of Public Sector Banks, Private Sector Banks, Foreign Banks, Regional Rural Banks, Co-operative Banks, Payments Bank and Small Finance bank describes the banking sector in India.

Public Sector Banks and Private Sector Banks are the two main players in Indian Banking sector. There are two schools of thought, one supports the Public Sector Bank and another support Private sector Bank in the economy. It can be observed that both categories of bank have addressed the need of the hour and trying hard to innovate their products and services in order to maximize their profitability and financial efficiency. The objective of the study is to compare the financial efficiencies of Public and Private Sector Banks. Research design For this study causal research design is adopted. This type of research is typically structured with a clearly stated objective of discovering associations and causal relationships among different variables. Statistical Model used is data Envelopment Analysis – Simplex LP Model. In which variables are – RTGS, M-Banking, ATM & POS; Output Variable – ROA, ROE & NIM. Data used in research are Secondary data on RTGS, M-Banking, ATM and POS of SBI and ICICI Bank. Also ROA, ROE & NIM of SBI and ICICI Bank. Conclusion of the study are that Public sector banks are more efficient than Private sector banks in terms of Financial Innovation.

JEL Classification Code: G21

Keywords: Financial Efficiency, Financial Innovation and Bank Efficiency.

1. INTRODUCTION:

Banking is the fundamental building block of any financial system. It can be considered as the lifeline of the economy. The efficiency of the financial system is dependent on the degree of efficiency of its banking system. Banking is the accelerator of economic development by channelizing the fund of savers to the borrowers, who further invests in economy and accelerate the development. Banking is important because it brings the individual into formal financial system through which efficiency of money can be maximized.

In Indian banking system RBI is the central bank who licenses institutions to carry out banking business. The banking model in India has undergone many changes since the British era. After witnessing many significant changes Indian

banking system is at its matured stage. At present the combination of Public Sector Banks, Private Sector Banks, Foreign Banks, Regional Rural Banks, Co-operative Banks, Payments Bank and Small Finance bank describes the banking sector in India. Among these banking players Public Sector Banks and Private Sector Banks own majority of market share. Traditionally India has Public Sector Banks but after the liberalization period of 1991 Private Sector Banks have entered into market. The objective of introducing such category of banks was to create competition in the market. Since the introduction of Private sector banks Financial Innovation has become an integral part of banking business. Earlier Financial Innovation in banking was considered as the tool for market positioning but dynamic market equilibrium has redefined Financial Innovation as important input for profitability and efficiency.

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Financial innovation is the act of creating new financial instruments and then wide spreading with new financial technologies into the markets. These innovations are classified as product, process or organizational innovation.

In India, the evolution of innovative banking instruments can be traced from the liberalization process of 1992, in deposit, payment and credit category. Introduction of plastic cards in early 1990; Electronic clearing System in late 1990; Electronic Fund transfer in 2000; Internet banking in 2001; RTGS in 2004; NEFT in 2006; Business Consultants in 2006; CTS in 2008; M-banking in 2010 and Payments Banks in 2016 are the major milestones in the walk of financial innovation added by Indian banking system.

Public Sector Banks and Private Sector Banks are the two main players in Indian Banking sector. There are two schools of thought, one supports the Public Sector Bank and another support Private sector Bank in the economy. As it can be observed that both categories of bank have addressed the need of the hour and trying hard to innovate their products and services in order to maximize their profitability and financial efficiency.

The study makes an attempt to compare the efficiency of these banks by choosing the leaders from both the categories. The comparison is made on the basis of innovations they have adopted.

In this study Innovative products and services are taken as input and financial ratios are taken as output. Because of existence of multiple input and multiple out Data Envelopment Analysis is used as statistical tool.

OBJECTIVES OF THE STUDY:

- To compare the financial efficiencies of Public and Private Sector Banks.

FINANCIAL INNOVATION:

Solans (2003) defined financial innovation as “both the technological advances which facilitate access to information, trading and means of payment, and the emergence of new financial instruments and services, new forms of organization and more developed and complete financial markets”.

Financial innovation can also refer to the creation of new instruments and can be defined as the act of creating and popularizing new financial

instruments, technologies, institutions, and markets (**Lerner, Tufano, 2011**).

With the economic reform of 1991 and the emergence of technology in the financial sector, Indian banking has witnessed a paradigm shift in the approach of banking business. A number of innovative products in the form of Plastic Cards, Payment System, Mobile Banking, ATM etc. have come into existence and gained popularity among the customers. With the passage of time these innovative products have become frontline input for any bank to be competitive in the market. RTGS, M-banking, ATM and POS are such innovations that have made significant changes at the payment horizon.

Figure 1.1 to 1.5 presents the usage data of RTGS, M-Banking, ATM and POS.

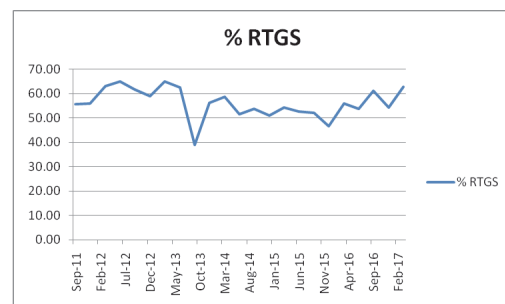


Figure 1.1

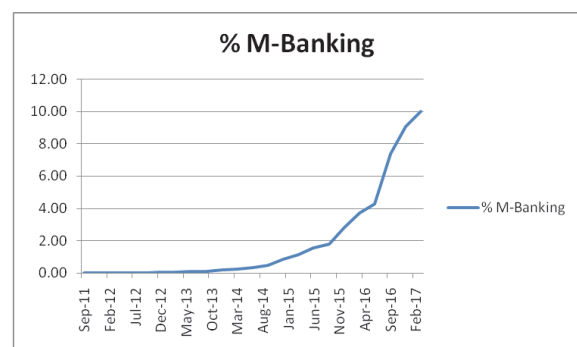


Figure 1.2

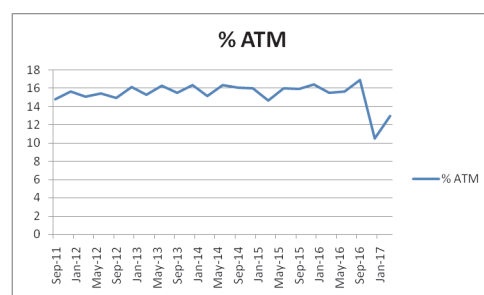


Figure 1.3

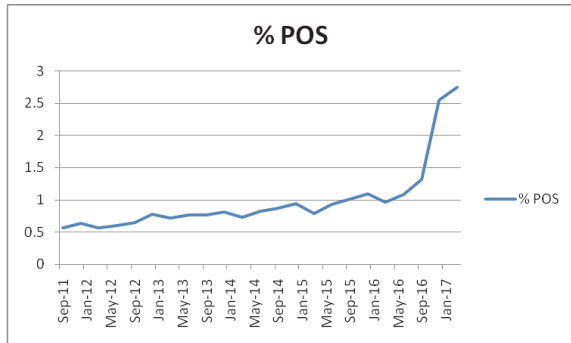


Figure 1.4

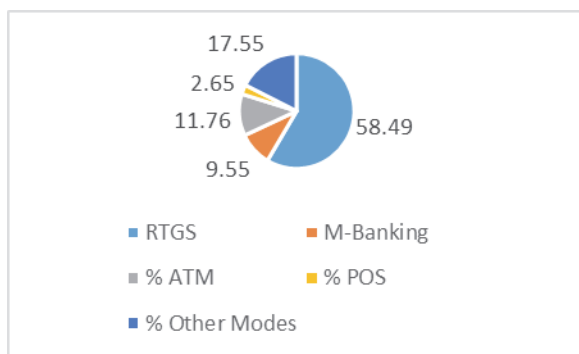


Figure 1.5

Financial Efficiency:

Financial Efficiency of a concern can be defined as how well the inputs invested for each alternative can produce maximum revenue to the concern. In practice there many financial ratios which can be considered as the measures of financial efficiency. In banking context Return on Assets (ROA), Return on Equity (ROE) and Net Interest Margin (NIM) is used predominantly as the measure of bank’s financial efficiency.

Return on Assets (ROA):

Return on assets (ROA) is a financial ratio expressed in terms of percentage profit against the overall resources employed. It is commonly defined as net income divided by total assets.

Figure 1.6 shows the ROA of SBI and ICICI Bank since March 2012 –

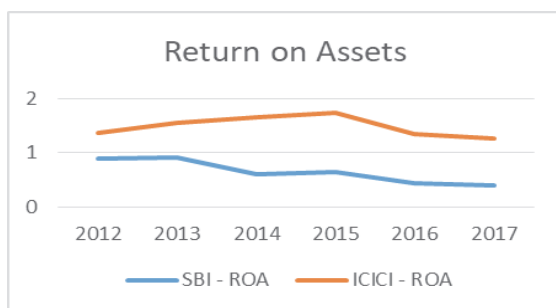


Figure 1.6

Return on Equity (ROE):

Return on equity (ROE) is expressed as the % net income returned against shareholders equity. Return on equity measures how much profit a company generates with the shareholder’s money.

Figure 1.7 shows the ROE of SBI and ICICI Bank since March 2012 –

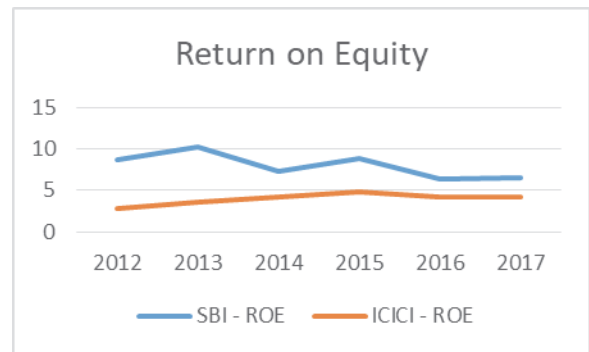


Figure 1.7

Net Interest Margin (NIM):

Net interest margin (NIM) is a measure of the difference between the interest income generated by banks and the amount of interest paid out to their lenders (for example, deposits), relative to the amount of their (interest-earning) assets.

Figure 1.8 shows the NIM of SBI and ICICI Bank since March 2012 –

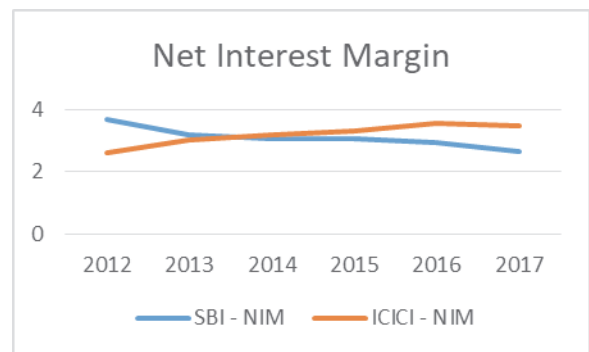


Figure 1.8

2. LITERATURE REVIEW:

This section includes the theoretical framework and empirical studies, conducted in the area of financial innovation in the banking sector and also the studies done in the context of banking reserve ratio.

2.1 Theoretical Review:

By keeping in mind the basic focus of Indian

banking reform, 1996, this study includes the following fundamental theories of financial innovation –

The transaction cost innovation theory is given by Hicks & Niehans (1983). According to them dominant factor of financial innovation is the reduction of transaction cost, and financial innovation is the response of the advance in technology that caused the transaction cost to reduce. This cost reduction may be catalyst for financial innovation and improvement in financial services. The theory is based on microscopic economic structure change.

Rogers Innovation Diffusion Theory: Rogers' Diffusion of Innovation Theory (Rogers, 1995) seeks to explain how new ideas or innovations are adopted, and this theory proposes that there are five attributes of an innovation that effect adoption: relative advantage, compatibility, complexity, trialability and observability.

Task Technology Fit Theory: The task technology fit (TTF) theory explains that it is more likely to have a positive impact on individual performance and be used if the capabilities of information communication and technology (ICT) match the tasks that the user must perform (Goodhue and Thompson, 1995).

2.2 Empirical Review:

Kemunto, Oira & Kibati. (2016); in their study "Influence of Innovation on The Performance of Commercial Banks" have investigated the effects of mobile banking & Agency Banking on financial performance of commercial banks in Kenya. The study explains that bank innovations influence financial performance of commercial banks in Kenya positively.

Sandeep Kaur (2015); has studied new innovations in the banking sector under the research title, "A Study on New Innovations in Banking Sector" and concluded that most of the foreign banks adopted the new technology very earlier than Indian banks. Some of the private banks in India like ICICI, AXIS and HDFC bank has taken initiative the field of innovative banking.

Akhisar. I et al. (2015); conducted a study on "The effects of Innovation on Bank performance: The case of electronic Banking services". In their study they have measured the impact of electronic innovations on bank performance and project the trend of impact of innovation in developing and

developed countries. The study concluded as, almost all the innovative banking services affect profitability and POS terminals & internet banking services affect negatively in some situations because of huge infra cost.

Charu Modi (2014); in her paper "Innovationn in Indian Banking sector - Use of Technological Products" has studied the technological innovation initiatives in bank and the effect of innovation on rural areas. She did conclude that technological banking products are most favored as innovation and they can result positively in the rural areas if the constraints are eliminated.

Maletic,Kreca, Predrag (2013) analyzed application of DEA methodology in measuring efficiency in banking sector. Two models with different input, output indicator with sample size of 30 banks were selected. First model define interest and non interest expense model B observe employment and deposits.

Ngigi Carolyne Nyathira (2012); in his study "Financial Innovation & its effect on financial performance of commercial banks in Kenya" have studied the effect of financial innovation on financial performance of commercial banks and also test the correlation between output of two payment systems (Automated clearing house & RTGS) and banking sector profitability. The study concludes as - Financial Innovation has positive impact on financial performance and can explain about 98.7% variation in profitability.

In the case of Turkish Banks, (**Mehmet Hasan Eken Suleyman Kale, A J B M vol. 5(3) PP 889-901, 4 Feb, 2011**), it is apparent that branch size and scale efficiency are related to each other. As branch size increases scale efficiency increases too and after the most productive scale size, however, as the size increases efficiency decreases.

Sood.V and Ranjan.P (2010); in their paper "Financial Innovation in India: An empirical study" have studied the present situation of financial innovation in India and tried to establish the relationship among financial innovation, GDP & Inflation. They concluded that the variables are closely related to each other.

Hays, Lurgio (2009), discussed to differentiate between low efficiency and high efficiency community banks (less than \$1 billion in total assets) based upon the efficiency ratio, a commonly used financial performance measure



that relates non-interest expenses to total operating income.

Bader, Mohamad, Ariff (2008) assessed the average and overtime efficiency of those banks based on their size, age, and region using static and dynamic panels. The findings suggest that there are no significant differences between the overall efficiency results of conventional versus Islamic banks.

3. RESEARCH METHODOLOGY:

3.1 Research Design

For this study causal research design is adopted. In this research design secondary data on RTGS, M-Banking, ATM, POS, are used as input variables and data on ROA, ROE and NIM are used as output variables.

This design is further useful because it does not allow researcher to be subjective about the conclusion. Researcher has to conclude on the basis of the result obtained during the causality testing.

3.2 Population and Sample Size

There is judgmental sampling technique used in this study as the research work is carried on two leader banks from respective categories, assuming that these representative banks exhibit innovation driven results.

For the study purpose data on input and out variables are collected from RBI database and annual reports of respective banks for the time period of 2011-2017.

3.3 Data Collection & Study Variables

The study used secondary data obtained from reports published by the Reserve Bank of India and annual reports of SBI & ICICI Bank.

Input variables – RGS, M-Banking, ATM and POS data of SBI and ICICI Bank for the duration Apr 2011 to Mar 2017.

Output variables – ROA, ROE and NIM data of SBI and ICICI Bank for the duration 2012 to 2017.

3.4 Statistical Model

The study is concerned to compare the efficiency of SBI and ICICI bank on the basis of financial ratios after adopting Innovative Payment systems.

In this study there are multiple inputs and multiple outputs. Also the objective is to compare the efficiencies of two banks. Therefore Data Envelopment Analysis is used.

With the available data for input and out variables it was found that all linearity conditions were satisfied. Therefore simplex LP model in DEA is used for the study.

Also the weights have assigned to SBI and ICICI bank as per the market share of Public Sector Bank and Private Sector Bank. So the weights assigned to SBI and ICICI are 0.8 and 0.2 respectively.

Hypothesis

H0: Public Sector Banks are more efficient at innovation front than Private Sector Banks.

H1: Public Sector Banks are inefficient at innovation front compare to Private Sector Banks

4. ANALYSIS

A Data Envelopment Analysis with simplex LP model is used. Table no. 4.1 to 4.3 describes the comparison.

Table No. 4.1 presents the initial model for the comparison. The model shows the banks under consideration, RTGS, M-banking, ATM and POS as the inputs for both banks and ROA, ROE and NIM as the output variables for both the banks. The model also include weights for banks under study. For SBI the weight is 0.8 and for ICICI the weight is 0.2.

Assuming SBI as more efficient than ICICI the simplex model was developed to draw the efficiency frontier.

Table 4.2 shown the comparative result of efficiencies between SBI and ICICI banks. In the table the weights for SBI and ICICI are 1 and 0 against the efficiency 1 that shows with the present data of representatives of Public sector and Private sector banks (SBI & ICICI), Public Sector Bank (SBI) found to be more efficient compare to Private Sector Bank (ICICI).

Table 4.3 shows the solver generated report for the comparative study. The table also highlights that all the optimality conditions were checked and found to be satisfied before applying the method.

Table No. 4.1: Initial Model

Bank	Input1 RTGS (Billion)	Input2 MOB ('000)	Input3 ATM (Million)	Input4 POS (Million)	Output1 ROA	Output2 ROE	Output3 NIM	Weights
SBI	70.29	1.16	6.73	0.31	0.64	6.01	3.09	0.8
ICICI	42.94	0.65	1.66	0.22	1.49	3.98	3.19	0.2
							Eff	1
Constraint		LHS		RHS				
	Input1	(Billion)		64.82	<=		70.29	
	Input2	(Thousand)		1.058	<=		1.16	
	Input3	(Million)		5.716	<=		6.73	
	Input4	(Million)		0.292	<=		0.31	
	Output1	%		0.81	>=		0.64	
	Output2	%		5.604	>=		6.01	
	Output3	%		3.11	>=		3.09	
	$\Sigma\alpha$			1	=		1	

Table No. 4.2: DEA Simplex LP Model

Bank	Input1 RTGS (Billion)	Input2 MOB ('000)	Input3 ATM (Million)	Input4 POS (Million)	Output1 ROA	Output2 ROE	Output3 NIM	Weights
SBI	70.29	1.16	6.73	0.31	0.64	6.01	3.09	1
ICICI	42.94	0.65	1.66	0.22	1.49	3.98	3.19	0
							Eff	1
Constraint		LHS		RHS				
	Input1	(Billion)		70.29	<=		70.29	
	Input2	(Thousand)		1.16	<=		1.16	
	Input3	(Million)		6.73	<=		6.73	
	Input4	(Million)		0.31	<=		0.31	
	Output1	%		0.64	>=		0.64	
	Output2	%		6.01	>=		6.01	
	Output3	%		3.09	>=		3.09	
	$\Sigma\alpha$			1	=		1	

Table No. 4.3

Result: Solver found a solution. All Constraints and optimality conditions are satisfied.

Solver Engine

Engine: Simplex LP
Solution Time: 0.032 Seconds.
Iterations: 5 Subproblems: 0

Objective Cell (Min)

Cell	Name	Original Value	Final Value
\$L\$7	Efficiency Weights	1	1

Variable Cells

Cell	Name	Original Value	Final Value	Integer
\$L\$4	SBI Weights	0.8	1	Contin
\$L\$5	ICICI Weights	0.2	0	Contin
\$L\$7	Efficiency Weights	1	1	Contin

Constraints

Cell	Name	Cell Value	Formula	Status	Slack
\$H\$12	(Billion) LHS	70.29	\$H\$12<=\$J\$12	Binding	0
\$H\$13	(Thousand) LHS	1.16	\$H\$13<=\$J\$13	Binding	0
\$H\$14	(Million) LHS	6.73	\$H\$14<=\$J\$14	Binding	0
\$H\$15	(Million) LHS	0.31	\$H\$15<=\$J\$15	Binding	0
\$H\$16	% LHS	0.64	\$H\$16>=\$J\$16	Binding	0
\$H\$17	% LHS	6.01	\$H\$17>=\$J\$17	Binding	0
\$H\$18	% LHS	3.09	\$H\$18>=\$J\$18	Binding	0
\$H\$19	“á LHS	1	\$H\$19=\$J\$19	Binding	0

Input & Output data State Bank of India

Years	Input				Output		
	RTGS (Trillion)	MOB (Trillion)	ATM (Trillion)	POS (Trillion)	ROA	ROE	NIM
Mar-12	55.10178	0.009088183	4.9012771	0.0962177	0.9	8.7	3.7
Mar-13	63.69415	0.019707786	5.8095808	0.1383189	0.9	10	3.2
Mar-14	62.65954	0.035203146	6.826092754	0.195348838	0.6	7.3	3.1
Mar-15	68.84429	0.104853319	7.202720264	0.252519062	0.6	8.8	3.1
Mar-16	76.12607	0.957702626	8.134691552	0.359942571	0.4	6.4	2.9
Mar-17	95.34126	5.814114285	7.534604739	0.81137801	0.4	6.6	2.7
Average	70.29	1.16	6.73	0.31	0.64	8.01	3.09

ICICI

Years	Input				Output		
	RTGS (Trillion)	MOB (Trillion)	ATM (Trillion)	POS (Trillion)	ROA	ROE	NIM
Mar-12	27.78073	0.006032106	1.288350851	0.090850683	1.36	2.8	2.6
Mar-13	26.56392	0.020391987	1.424963888	0.132016542	1.55	3.61	3
Mar-14	32.98742	0.054020643	1.66540855	0.1669979	1.65	4.25	3.19
Mar-15	42.55019	0.177746261	1.9106243	0.21535399	1.73	4.82	3.32
Mar-16	52.43448	0.985585953	1.995097195	0.262638989	1.35	4.18	3.56
Mar-17	75.33033	2.640035514	1.679027165	0.436247914	1.27	4.21	3.47
Average	42.94	0.65	1.66	0.22	1.49	3.98	3.19

6. CONCLUSION:

Financial Innovation has become the integral part of the banking business. Irrespective of the category, banks do innovate their products and services in order to increase their market penetration and in result higher profitability and efficiency. Public Sector Banks and Private Sector Banks are the leader in this segment. Though evidences can be found that Private Sector Banks are the main reason for bring in financial innovation to the banking arena but the study result shows that SBI has better efficiency compare to ICICI Bank in terms of financial results through Financial Innovations.

The reason for this result can be the greater market penetration of SBI compare to ICICI Bank. Also the customer base of SBI is much higher than

the ICICI Bank facilitating SBI a better usage rate of innovative products.

From the above study results a conclusion may be drawn that Public sector banks are more efficient than Private sector banks in terms of Financial Innovation.

7. LIMITATIONS:

- Secondary data for M-banking, ATM, POS were available only for six years 2011 – 2017, which is a very small group of data to estimate such relationships.
- For using DEA method all the data have to be converted into their average values.
- There are lot many financial innovations that may also affect the Reserves but in the study

only RTGS, M-banking, ATM & POS have taken as innovation factors. An increase in the list of innovation factor may change the results.

- In this study only a payment innovation components are used and other innovations like deposit and credit have taken into consideration. Result may vary on inclusion of such components.
- The study involves only one bank from each category of banks. Inclusion of other banks may change the result of the study.

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SNS Communication Touch Points: Enhancing Indian Customers' Experience

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ABSTRACT

Burgeoning proliferation and embracement of social networking sites, a sweeping cultural, social and economic incident, has metamorphosed universal social phenomenon of communication and interpersonal interactions across globe. Basic desire of human beings for social networking, leveraged by speed, scale and economies of internet, has led to emergence of new social behaviours and shifting of offline social behaviours to online albeit san temporal and geographical boundaries. Social platforms' potential to tap 'cognitive surplus' of society has given access to unadulterated customer opinions and behaviours. All this necessitates understanding the factors affecting users' espousal of social networking sites in order to incorporate and effective utilize these for framing persuasive and effective marketing strategies. The proposed hypotheses, framed on concepts adapted from UTAUT model, were tested using multiple regression analysis. Outcome of the research suggested that user's Performance Expectancy and user's Social Influence significantly influence his/her Social Networking Sites Embracement whereas Effort Expectancy and Facilitating Conditions do not influence embracement significantly.

Findings may help marketers and social media marketing organisations in comprehending how to integrate social networking sites in their marketing and communication efforts to enhance customer experience.

Key Words: Social networking Sites, UTAUT, Social networking sites embracement, Behavioural intention models.

INTRODUCTION

Technological transformations have always exhibited far reaching social impacts. One such technical transformation, Web 2.0, has transformed information storage, usage, retrieval, and dissemination in social groups (Schueler, 2011). Though, people had started connecting through internet in early 1980s, but emergence of Web 2.0 in 2000s propelled embracement of social networking sites (SNS henceforth) across globe (Schivinski, *et al.*, 2012) and it has turned into a sweeping cultural, social and economic incident (Bughin *et al.*, 2012). Speed, scale and economies of internet has metamorphosed social phenomenon of communication and interpersonal interactions (Bughin *et al.*, 2012) and new online social behaviours have emerged. Social platforms' potential to tap 'cognitive surplus' of society, san temporal and geographical boundaries, has generated unfiltered customer behavioural data and has placed new demands on organisations (Bughin *et al.*, 2012). Accordingly, present paper

is an attempt to understand factors affecting users' embracement of SNS in Indian context for effective utilisation and incorporation of these in strategic marketing endeavours.

LITERATURE REVIEW

Overview of Social Networking Sites (SNS)

In accordance with Ellison (2007), SNS are internet-enabled platforms that facilitate users to compose an open or semi-open profile in conformity with a restricted framework. Within this framework, users can display a list of their connections, can view and roam around profiles of their connections and other users' and their connections' profiles.

Despite varying nature and nomenclature of connections, one of the basic tenets of SNS is to support and maintain already accessible strong and weak, personal and professional offline social relationships for individuals and businesses

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(Ellison, 2007; Lorenzo-Romero *et al.*, 2011). SNS are an effective marketing tool (Constantinides *et al.*, 2008), information dissemination platform (Tikkanen *et al.*, 2009) and customer empowerment tool (Lorenzo *et al.*, 2009). SNS support and cater to niche communities as well as broader audience base; are 'egocentric' networks (having individuals at the centre of community) (Ellison, 2007); reflect unmediated social structures and accord a new organisational framework to online communities (Ellison, 2007). SNS have acquired a dominant role in online communities by providing more efficient access to valuable information to members of the community portal (O'Murchu *et al.*, 2004; Cheung *et al.*, 2011).

Research done in context of SNS is on impression formation, impression management, self-presentation and friendship performance (Boyd and Heer, 2006), patterns of friending, messaging and usage (Golder *et al.*, 2007), relation between profile elements and number of friends (Lampe *et al.*, 2007), network visualization (Paolillo & Wright, 2006). Researchers have thrown light on social capital dynamism and social and cultural identities (Ellison, 2007; Wang *et al.*, 2012). Research has been done to explore- Friendship classification (Hsu & Lancaster, 2007), role of passive members, inviters, and linker (Kumar *et al.*, 2010) and role of language (Herring *et al.*, 2007) in expansion of social networks. Bagozzi & Dholakia (2002) looked into user's participation intentions from a socio-psychological angle. Study analyzed the individual and social factors influencing participation intentions of members. Dholakia *et al.* (2004) explored how norms of group and self-representation of individuals affect their involvement virtual societies. Cheung *et al.* (2011) combined uses and gratification theory with social influence and social presence to investigate what lures students to social networking sites. Wang *et al.* (2012) used TAM to study online community participation in USA and found that community environment, self-efficacy, and intrinsic motivation affect embracement of online community participation. Lorenzo-Romero *et al.* (2011) adopted extended TAM (adding trust and perceived risk) to understand SNS acceptance determinants in Netherlands. Zhou (2011) mainly studied member participation in online communities from social influence point of view. Some other perspectives used to understand

online users' acceptance of SNS and their behaviors are assimilation of social cognitive and social capital theories as in Chiu, Hsu & Wang (2006), social network analysis with respect to establishment of communities as in Toral *et al.* (2009), Trust theory as in Wu, Chen & Chung (2010) and Commitment theory as in Bateman, Gray & Butler (2011).

Zhou, Hongxiu & Yong (2010) found information quality, system quality and intrinsic motivations influence mobile SNS users' loyalty. Kwon *et al.* (2014) amalgamated TAM with other influencing factors such as usefulness of SNS, perceived mobility of SNS, security accorded by SNS, connectedness provided to user, quality of system and of service provided by system, and uninterrupted navigation experience to explain embracement of SNS (specifically Facebook and Twitter). Chen (2014) in a study done in Taiwan found that continuous usage of Facebook is positively affected by user attitude, attachment motivation, subjective norm, personal innovativeness and perceived enjoyment.

OVERVIEW OF TECHNOLOGY ACCEPTANCE MODELS

Embracement of new information technologies (IT) in mandatory work settings is under scanner of Information systems research since long (Davis *et al.*, 1989; Venkatesh *et al.*, 2000). Researchers' have proposed various models while uncovering "hows and whys" of embracement of IT with either intention to use or actual usage or both as outcome variable. Models have used different sets of acceptance determinants, which have been adopted from diverse fields such as Psychology, Social psychology, Sociology, and Information and Communication Technology to name some (Davis *et al.*, 1989; Davis, 1989; Venkatesh, 2000; Venkatesh *et al.*, 2003). Few prominent models propounded by researchers to study embracement of new information technologies at workplaces are Theory of Reasoned Action (TRA) by Ajzen & Fishbein (1980), extension of TRA named as Technology Acceptance Model (TAM) by Davis (1989), Model depicting extrinsic and intrinsic motivation by Davis, Bagozzi & Warshaw (1992), TAM2 by Venkatesh (2000), Planned Behavior Theories (Theory of Planned Behavior, Decomposed TPB and TAM & TPB combined) (Taylor & Todd, 1995), PC Utilization Model



(Thompson *et al.*, 1991) and Diffusion of Innovation Theory by Rogers (2010).

TAM, TPB, TRA, C-TPB & TAM, MPCU and other such models have been utilised to explain the embracement of personal computers and software applications (Venkatesh & Brown, 2001), e-commerce (Lallmahamood, 2007), m-commerce (Wu & Wang, 2005), m-banking (Sharma & Kansal, 2012), net-banking (Lai & Li, 2005) and e-health (Lanseng & Andreassen, 2007). Chen *et al.* (2011) while analyzing 24 studies exhibited application of TAM in diverse fields like mobile data, learning and services in electronic environments and self-service technologies and found studies yielding statistically reliable results.

Unified Theory of Acceptance and Use of Technology (UTAUT) Model

UTAUT Model (Venkatesh *et al.*, 2003), is a synthesis of earlier technology acceptance models. It is a definitive, refined and parsimonious model and explains various factors affecting user's intentions and actual embracement conducts emerging with continued interactions with a system (Venkatesh *et al.*, 2003).

Model uses four moderators and four direct predictors to study system use motives and embracement behavior. Core constructs are:

- a. Performance Expectancy: degree of user's belief that system usage will improve performance of a task
- b. Effort Expectancy: extent of ease that can be attributed to the usage of a system
- c. Social Influence: extent of User's perception of significant others' belief in use of new system by user
- d. Facilitating Conditions: extent of user's belief about existence of technical and other organisational support systems

Predictability of model is better than other prevalent models (Venkatesh *et al.*, 2003). Repeated investigations have lent more credence to robustness of the model even in cross-cultural studies (Oshlyansky *et al.*, 2007), though even contrary results emerged (Im *et al.*, 2011). Model was extended to incorporate price value, habit, and hedonic motivation (Venkatesh *et al.*, 2012) Constructs of UTAUT model coupled with other constructs have been used to understand factors

influencing intention to use mobile payment (Qasim & Abu-Shanab, 2015). Attuquayefio & Addo (2014) analyzed 20 studies using UTAUT and its extensions in telecommunication, banking, education and health sectors. Model has been applied to location-based services (Yun *et al.*, 2011), online bulletin boards (Marchewka & Kostiwa, 2014), and technology-based services (Tsourela & Roumeliotis, 2015). Mu & Moon (2013) used model to study purchase intentions through SNS using experience and gender as moderators. Guo (2014), using gender orientation as moderating variable, predicted how Social influence on user impacts his/her intention to use a system and supporting infrastructure in context of mobile SNS in China. In Indian context, Verma (2015) exhibited that social influence, facilitating condition and effort expectancy have significant sway on Intentional social action in SNS. Borrero *et al.* (2014) found that for internet social movements Spanish students' use intentions can be predicted by effort expectancy, social influence, and performance expectancy due to their significant influence. Although UTAUT model (even with additional constructs) satisfactorily explained intention to use and embracement of technologies across various contexts, yet in Sub-Saharan African milieu, model could not hold.

RESEARCH GAP

SNS require a technological ecosystem to survive and thrive and hence their embracement can be studied in a manner similar to embracement and use of new technologies (Wang *et al.*, 2012). Analysis of available and existing studies evidences that though earlier studies have attempted to grasp embracement of SNS (mostly Facebook), still lot of unexplored areas warrant attention to comprehend reasons propelling masses to SNS (Cheung *et al.*, 2011; Wang *et al.*, 2012), especially outside USA (Ellison, 2007). UTAUT model, being a synthesis of existing prominent models and not being used by many researchers to study embracement of SNS in Indian context, was considered most suitable for studying embracement of SNS. Hence, the researchers undertook this study to look into factors influencing embracement of SNS in Indian context using UTAUT model and thereby suggest measures for effective inclusion of SNS in strategic marketing endeavours of organisations.

OBJECTIVES

1. To study influence of Performance Expectancy, Effort Expectancy, Social Influence and Facilitating Conditions on SNS embracement.

2. To suggest measures for effective inclusion of SNS in strategic marketing endeavours.

THEORETICAL RESEARCH STRUCTURE AND HYPOTHESES

Figure 1 illustrates theoretical research structure used in study. Study used four constructs, namely Performance Expectancy, Effort Expectancy, Social Influence and Facilitating Conditions as predictors and one outcome construct namely SNS embracement.

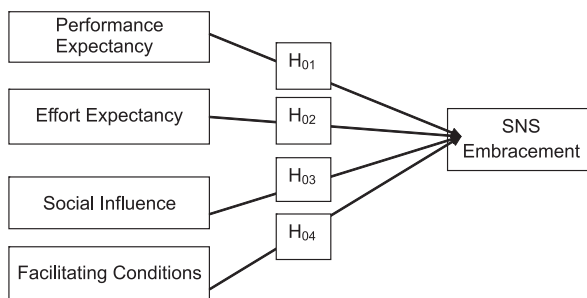


Figure: 1 Hypothesized Research Structure

The constructs used in the study were borrowed from Venkatesh *et al.* (2003). However, four moderators (gender of the user, age of the user, experience of the user and volition of the user) used in Venkatesh *et al.* (2003) were dropped. Voluntariness of use was not used as embracement of SNS is voluntary (Bagozzi *et al.*, 2002; Wang *et al.*, 2012). Experience was not used as respondents were already active on platforms and thus were well versed with SNS. Heavy dominance of SNS by younger population in India (Singh, 2013) led to exclusion of age as moderator. Gender was not used due to criticism of demographic variables as moderators because of challenges posed by these to theoretical insights (Park, 2010). The final five constructs were adapted to suit study by taking assistance of Wang *et al.* (2012).

Four null hypotheses to accomplish first objective were as:

H₀₁: User's Performance Expectancy (PE) does not affect Embracement of SNS (SE) significantly.

H₀₂: User's Effort Expectancy (EE) does not affect Embracement of SNS (SE) significantly.

H₀₃: User's Social influence (SI) does not affect Embracement of SNS (SE) significantly.

H₀₄: User's Facilitating Conditions (FC) does not affect Embracement of SNS (SE) significantly.

RESEARCH APPROACH

Study instance has foundations in primary and secondary data. For this purpose, secondary information from the books, research findings and information published in journals and reports on websites were accessed. Primary data were collected using online questionnaire, which used customised five- point Likert scale, wherein "1" was interpreted as Strongly Agree and "5" as Strongly Disagree. Selection of Indian SNS users was by snowball sampling technique. To test the hypotheses, statistical test Multiple Regression Analysis was applied.

ANALYSIS AND INTERPRETATIONS

Basic Sample Analysis

After removal of non-users and outliers, final 92 cases were analysed. Demographic profile evidenced heavy dominance of young population on SNS in India, 92.4 percent respondents were between 18 years to 44 years, in concurrence with available reports (Singh, 2013). 53 % Males and 47 % females were using SNS. Almost 72 % were graduates and postgraduates, 38 % were students and 51.1 % respondents' annual income ranged between 'less than 2 lakhs to 8 lakhs'. 'more than 07 hours per week' internet usage was reported by 70.7 % respondents and 34.8 % were using SNS for 'more than 07 hours per week'.

Values of "á" (Cronbach's) scaled between 0.84 to 0.51 (entire scale and different constructs) indicating adequate internal consistency, reliability and validity of each construct.

Regression Analysis

Researchers used multiple regression analysis for predicting influence of predictors (PE, EE, SI, FC) on outcome variable (SE). There was no multiácollinearity between predictors (all 'r' between ±.9). Model summary is given in Table 1. Independent variables explained almost 43 percent of variance in SNS Embracement. Adjusted R² and R² vales were similar, so proposed model generalised well. Also, cross-



validity of model was good (adjusted $R^2 = 0.367$). Assumption of independent errors of regression has also been met (Durbin–Watson statistic-1.831) (Field, 2009). $F(4, 87) = 16.293$ was significant and it indicated that model fitted significantly.

Further, PE ($t(87) = 4.136, p < 0.05, \text{significant}$) and SI ($t(87) = 3.510, p < 0.05, \text{significant}$) were contributing significantly to ability to estimate value of SE. PE with $\beta = 0.413$ was the most significant effect on SE with next significant influence being SI with $\beta = 0.312$. Thus, Users’ Performance Expectancy and Users’ Social Influence affect SNS Embracement significantly.

However, EE with $\beta = 0.115$ and FC with $\beta = 0.000$ (almost nil) were non-significant in affecting SE. Hence, Hypotheses H_{02} and H_{04} were supported. Hence, Users’ Effort Expectancy and Users’ Facilitating Conditions does not affect SNS Embracement significantly. Positive values of ‘unstandardized b’ indicate the positive influence of independent constructs on dependent construct.

Collinearity statistics exhibits no collinearity within sample data (VIF values < 10 and tolerance statistics above 0.2). Sample conformed to the expectations of an accurate model (no cases have standardized residual within about ± 2 and within about ± 2.5) (Field, 2009). None of the cases was having an undue influence on the model (no Cook’s distance values > 1 , Mahalanobis distance values - almost all < 15 , Leverage values within boundary of 3 times average leverage). Standardized DFBeta statistics analysis revealed that none of the cases has undue influence over

regression parameters. Histogram of regression standardized residual and normal probability plot of regression standardized residual both indicated normality of residuals.

Scatter plot of standardized residuals against standardized predicted values exhibited that data set adhered to assumption of linearity and homoscedasticity. Therefore, in summary, model is accurate for the sample and can be generalized to population in most ways.

IMPLICATIONS FOR PRACTITIONERS

Results of Regression Analysis show that user’s Performance Expectancy has significant positive influence on his/her SNS Embracement. Finding coincides with the results of earlier researches that performance expectations from a structure influences its embracement in a significant way. (Davis *et al.*, 1989; Taylor *et al.*, 1995; Park, 2010). Analysis of items included in this construct also affirms that SNS embracement is based on pragmatism. Hence, successful inclusion of SNS in marketing strategy is contingent on fulfillment of some performance expectation of users for entertainment, for obtaining and interchange of information, for inculcating and supporting relationships and for garnering affective and social support.

As people use SNS for information acquisition and information exchange, SNS may be used as communication platforms to provide relevant, timely and real time information to help users in effective decision-making. Easy access and availability of product information combined with

Table: 1 Summary of Regression Model, Regression Coefficients & Collinearity Statistics

Summary of the Model ##		Unstandardized Coefficients		Standardized β	Coefficients#		Collinearity Statistics		Durbin-Watson
R^2	Adjusted R^2	b_i	Std. Error		t	Significance	Tolerance	VIF	
.428 ^a	.402	(Constant)	0.711	0.229		3.103	.003*		1.831
		PE	0.401	0.097	.413	4.136	.000*	0.658	
		EE	0.098	0.087	.115	1.132	.261	0.634	
		SI	0.231	0.066	.312	3.510	.001*	0.832	
		FC	6.903E-5	0.080	.000	0.001	.999	0.739	

#. Predictors: (Constant), PE, EE, SI, FC

##. Dependent Variable: SE

$F(4, 87) = 16.293^*$, $p < 0.05$

* Value significant at $p < 0.05$

virtual product experience technology, at pre-purchase stages of decision –making, is instrumental in reducing search costs for consumers. Moreover, such information helps in better quality assessment of products and thus, reduces gap between expectations and perceptions of customers especially for experience goods (Luo *et al.*, 2012).

As people seek entertainment from SNS, marketing communications via these platforms should be informative, yet amusing and visually pleasing so that messages are noticed easily in era of information explosion. Engrossing and mesmerizing messages will lead to better customer engagement (Drury, 2008), which may lead customers to have positive brand experience. Positive brand experiences help in inculcating favorable image, loyalty and attachment for the brand. It further results in customer satisfaction and repeat purchases (Chinomona, 2013). A case in instance can be customers sharing their experiences by uploading homemade commercials on YouTube (Drury, 2008).

Dominance of youth at SNS demands content delivered to be thought provoking (Meadows-klue, 2008) with ample opportunities to display feelings of participants. It may take shape of cultural associations of brand or association with some events (Meadows-klue, 2008) of social significance.

As people embrace SNS for social and emotional support, for forming and nurturing social ties, marketers can use these as customer support and customer relations medium (Meadows-klue, 2008). One way of doing this is to create brand communities. Researchers have established that offline brand communities successfully support activities such as information sharing, customer assistance, customer influence and loyalty besides providing social structure to customer-marketer relationship (Laroche, Habibi, Richard & Sankaranarayanan, 2012). Making these offline communities online using social media ecosystem will be more effective due to absence of geographical and temporal boundaries. Dell and Cisco Systems are prominent beneficiaries of the concept in corporate world (Laroche *et al.*, 2012). Researchers have established positive effects of brand communities such as shared consciousness and rituals, inculcation of brand loyalty, community engagement, and brand use (Laroche *et al.*, 2012). SNS are already instrumental in supporting and

in creating such brand communities (Kaplan & Haenlein, 2010).

Forging community ties with customers provides marketers opportunities to be considered in positive light (Duhan *et al.*, 2014a; Weinberg & Berger, 2011). As the attitudes impact an individual's usage behaviour (Ajzen & Fishbein, 2000), positive attitudes may ensure continuation (Yildirim, 2000) of SNS embracement. Continued embracement may turn visitors into patrons of SNS as well as of promoted brand in accordance with Congruity theory of attitudes (Osgood & Tannenbaum, 1955). According to social media engagement concept (Haven, 2007), patrons may become brand fans (Weinberg *et al.*, 2011) and then may become brand advocates as time elapses (Zailskaite-jakste & Kuvykaite, 2012). Assignment of identifiable staff to manage brand pages at SNS may help organisations to manage customer relations effectively (Duhan *et al.*, 2014a; Duhan & Singh, 2014b)

However, the fact that people exchange information with others via SNS has Janus-faced impact. Analysis of unfiltered, unbiased and detailed digital footprints of netizens may help organisations to become market leaders by churning out effective marketing mix strategies (Meadows-klue, 2008; Bughin *et al.*, 2012; Duhan *et al.*, 2014a). Alternately, it is a threat to marketers as information so exchanged is uncontrollable and wields considerable influence over participants (Drury, 2008; Weinberg *et al.*, 2011). Thus, marketers should assiduously keep a tab on conversations happening in SNS to manage the same for advantage of organizations as engagement with a brand is stronger in online settings relative to offline. Intense engagement in online environments is the result of availability of 'head and tail content' (Drury, 2008; Meadows-klue, 2008).

Social Influence is second important determinant contributing towards SNS Embracement. As embracement of SNS is voluntary, results are in contradiction to earlier results, which indicate that social influences play a significantly better role in system embracement in mandatory use environment (Davis *et al.*, 1989; Venkatesh & Davis, 2000). However, results are similar to other studies done in similar contexts that exhibited that companions and fellow colleagues exert social pressures in organizational as well as individual context (Liao *et al.*, 2007).



Result is significant to marketers as social influence combined with free and fast information exchange and information acquisition makes SNS very powerful mean for e- word of mouth possessing capabilities to have a sway over opinions and attitudes of people (Weinberg *et al.*, 2011; Duhan *et al.*, 2014a). SNS conversations amongst social contacts can be turned into customer touch points to enhance customer experience and hence to delight the customer.

Results supported the hypothesis H_{02} meaning there by that User's Effort Expectancy does not affect Embracement of SNS significantly. This result is in contradiction to previous studies in similar contexts (Wu *et al.*, 2005; Lorenzo-Romero *et al.*, 2011; Wang *et al.*, 2012). Effort Expectancy was found to be a significant influence in both-volitional and forced, usage situations across all eight models analyzed for their study by Venkatesh *et al.* (2003). However, it became non-significant with continued usage and increased experience over time. This result was in consistency with the earlier findings (Davis *et al.*, 1989; Thompson *et al.*, 1991; Thompson *et al.*, 1994; Agarwal & Prasad, 1998), though age and sex moderated the results (Venkatesh *et al.*, 2003). It appears to be the case in Indian perspective as well. Increased experience of users' with SNS may have rendered Effort Expectancy construct less significant in relation to mechanisms adopted (Davis *et al.*, 1989; Venkatesh, 1999), as the results are based on only users of SNS thereby implying enough exposure of users to SNS. However, marketers should take a cue from here and in order to attract and facilitate new users, they should ensure hassle free consumer interaction through these platforms. More mobile friendly apps and easily navigable and user-friendly interfaces at SNS platforms may help to attract more customers (Duhan *et al.*, 2014b).

Extrinsic and intrinsic determinants of initial participation and continued participation in SNS significantly differ from each other and are contextual in nature (Sun *et al.*, 2012). Hence, marketers need to understand that some incentives are desirable to keep users glued to their virtual social identities in order to ensure continued association with the SNS, once initial euphoria dies down (O'Murchu *et al.*, 2004). Suggested measures for this can be in the shape of adding features, which facilitate and encourage participation and reward users with recognition.

H_{04} is supported and thus user's Facilitating Conditions do not affect SNS Embracement of SNS (SE) significantly. Results indicate the influence to be negligible. This empirical finding totally coincides with earlier findings that Facilitating conditions are not significant in predicting the intentions to adopt a system in presence of Effort Expectancy and Facilitating Conditions (Venkatesh *et al.*, 2003). This is due to fact that both of these constructs are designed to remove barriers to use and cater to issues pertaining to infrastructural support. Age and experience moderate Facilitating Conditions in complicated IT use situations, which demands increasing intellectual and bodily efforts. As the usage of SNS in Indian scenario is youth dominated, the empirical finding appears to be relevant. However, this aspect needs to be carefully looked into if marketers want to attract and retain aged customer on to these platforms. One such way can be the designing of freely accessible mobile devices enabled applications providing anytime, anywhere access to users.

LIMITATIONS AND DIRECTIONS OF FUTURE RESEARCH

Even after the best endeavors, present research is not free from limitations. First, though the scale exhibits reliability and internal consistency, yet it needs to be further refined with additional testing and validity for better measurements. Secondly, model could explain only up to 43% of variance in SNS Embracement, the unexplained 57 % variance leaves a vast scope for future research. Future research with more variables may help in explaining this unexplained variance in Indian context. Possibility of multiple responses by one respondent, more participation of heavy users and self-reporting bias cannot be ruled out.

CONCLUSION

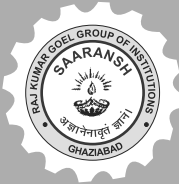
To sum up, paper investigated impact of four predictors i.e. user's Performance Expectancy, user's Effort Expectancy, Social Influence on user and Facilitating Conditions accorded to user on SNS Embracement in Indian context using UTAUT model. Collected data were subjected to multiple regression technique. Derived results partly supported the framed hypotheses. On the whole, conceptual model could significantly anticipate SNS Embracement by Indian users. Findings of

the research are significant for future academic research as well as marketers as these provide valuable insights to comprehend variables

affecting SNS embracement in Indian perspective and bring to fore that there are more unexplored variables, which have an influence on SNS Embracement.

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Quality of Work Life of Private Sector Banks Employees: A Discriminant Analysis

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ABSTRACT

Quality of Work Life (QWL) has emerged as one of the most important aspect of Job that ensures long term association of the employees with the organization. Quality of Work Life refers to the favorableness or un favorableness of a work environment for the employee.

This research work aimed at exploring the key factors which absolutely predict and discriminate High QWL and Low QWL perceiving employees.

The study is broadly based on primary data collected from 207 employees of Private Banks in Indore by using convenient sampling. Discriminant analysis was applied to know which factors absolutely predict High QWL Perceiving employees and Low QWL perceiving employees with the help of SPSS.

The study reveals that factors of QWL like 'healthy working environment', 'motivational climate', 'productivity', 'work redesign', 'sense of accomplishment' 'Employees' Democracy', and 'stimulating work environment' are significantly differentiated between High QWL perceiving employees and Low QWL perceiving employees.

Quality of work life covers various aspects under the general umbrella of supportive organizational behavior. The outcome of this research is beneficial for policymakers, planners and development economists to formulate effective strategy of human resource development in Banking sector and other similar sectors.

Key Words - Quality of Work Life, Discriminant analysis, Private Banks. High QWL perceiving employees, Low QWL perceiving employees.

1.1 INTRODUCTION

Quality Work Life (QWL) means having good supervision, good working conditions, good pay and benefits and an interesting challenging and rewarding job. High quality work life is sought through an employee relations philosophy that encourages the use of quality work life efforts which are systematic attempts by an organization to give workers greater opportunities to affect their jobs and their contributions to the organization's overall effectiveness. An organizational culture is the mirror of an organization's functioning and it can make or break its image and goodwill.

Heskett et al. (1997) proposed that QWL, which was measured by the feelings that employees have towards their jobs, colleagues, and companies would enhance a chain effect leading to organization's growth and profitability. Rise in the Quality of Work Life would help employees'

well being thereby the well being of the whole organization. This is an attempt to capitalize the human assets of the organization. The basic purpose of Quality of Work Life is to develop work environment that are excellent for employees as well as for organization. It aims at healthier, more satisfied and more productive employees and more efficient, adaptive and profitable organization. Cunningham, J.B. and T. Eberle, (1990) described that, the elements that are relevant to an individual's Quality of Work Life include the task, the physical work environment, social environment within the organization, administrative system and relationship between life on and off the job. Chan, C.H. and W.O. Einstein, (1990) pointed out Quality of Work Life reflects a concern for people's experience at work, their relationship with other people, their work setting and their effectiveness on the job . European Foundation for the Improvement of

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Living Conditions (2002) described that the Quality of Work Life is a multi-dimensional construct, made up of a number of interrelated factors that need careful consideration to conceptualize and measure. It is associated with job satisfaction, job involvement, motivation, productivity, health, safety, job security, competence development and balance between work and non-work life.

The QWL is also useful for controlling attrition rate in the organization. QWL and its relationships with employee attitude and effectiveness must, therefore, become an explicit objective for many of the human resource policies in modern organizations

It is the responsibility of the management to develop QWL among the employees to reduce the evil effects of lower level of QWL. Banking is essentially a high contact service industry and there is a close interaction between service provider and the customers in the traditional banking scenario. An attempt will be made to study the quality of work life of employees in Private Sector Commercial Banks. Exploratory factor analysis revealed eight factors, which significantly influence the quality of work life: Healthy Working environment, Motivational climate, Stimulating work environment, Productivity, Work Redesign, Sense of accomplishment, Employees' Democracy, Wants to improve life at work.

2.1 LITERATURE REVIEW

Many research studies have been carried out to study the Quality of Work Life in employees of different occupations to find out the level of satisfaction they maintain in their personal and professional life with the work pressure they have in their office. QWL has become topic for discussion and research, which is very frequently used by human resource practitioners to frame HR policies and practices. Various authors and researchers have proposed models of Quality of Working Life which include a wide range of factors. Efraty and Sirgy (2001) reported that QWL was positively related to organizational identification, job satisfaction, job involvement, and job effort and job performance. Nayeri Salehi & Noghabi (2001) also claimed a significant relationship between productivity and one's quality of work life. Employees who enjoy their work and feel happy make a very positive judgment about their quality of work life. This enjoyment and/ or happiness, is

the outcome of cognitive and affective evaluations of the flow experience (Diener, 2000). When employees are intrinsically motivated, they will continuously be interested in the work they are involved in, therefore being fascinated by the tasks they perform.

QWL is a major issue for employees, and how organizations deal with this issue is both of academic and practical significance. A higher quality of life at work will undoubtedly be determined by elements relating to better or worse relationships, and trust and commitment with bosses and/or subordinates (Requena, 2003). Sekaran Uma (1985) has examined the Quality of Work Life in the Indian (Nationalized) banking industry as perceived by organizational members at different organizational levels and in different job positions. She found that Quality of Work Life in the banking profession is not high. The recruitment of overqualified personnel for rather routine job, inequitable reward system which demotivate the better performing employees, frustration experienced due to lack of alternative job avenues, scarce chance of promotion, alienation from work etc. are pointed out as the reasons for poor Quality of Work Life in banks. The study suggests that greater decentralization, more autonomy, power and control will facilitate the individual banks to recruit the right people, design the jobs as best, and reward employees based on performance and thus enhance the Quality of Work Life in banks. Mirvis and Lawler (1984) suggested that Quality of working life was associated with satisfaction with wages, hours and working conditions, describing the -basic elements of a good Quality of Work Life as; safe work environment, equitable wages, equal employment opportunities and opportunities for advancement. Hackman and Oldham (1976) observed psychological growth needs as crucial determinant of Quality of working life. Several such needs were identified; Skill variety, Task Identity, Task significance, Autonomy and Feedback. They concluded that fulfillment of these needs plays an important role if employees are to experience high Quality of Working Life.

2.2 OBJECTIVE OF THE STUDY

To discriminate the employees of Banks between High QWL perceiving employees and Low QWL perceiving employees.

3.1 RESEARCH METHODOLOGY

This research is exploratory in nature. The employees of Private Banks of Indore city (n=207) were selected the sample of this study. For data collection purposes, Scale of QWL, which was developed by Dhar, S. et al. (2006), Reliability and Validity of the scale is 0.89 and 0.94 respectively has been used. These scale has been widely used in various researches of social science and well accepted to assess QWL of employees of various sectors. The questionnaire was divided in two parts. The first part of the questionnaire included questions about demographic profile of the respondents. Second part of the questionnaire included questions/variables related with dimensions of QWL. All the variables were required to be marked on likert scale in the range of 1 – 5, where 1 represented strongly disagree and 5 represented strongly agree. Data was collected from respondents during Jan –April 2015. Initially 225 questionnaires were distributed Out of the same, 212 questionnaires were received back and 207 questionnaires were finally considered for data analysis. A convenient sampling technique was adapted for the research. For analysis the data Discriminate analysis was applied with the help of Statistical Package for Social Sciences (SPSS version 21.0).

4.1 RESULTS AND DISCUSSIONS

Discriminant analysis is used to predict group membership. This technique is used to classify objects into one of the alternative groups on the basis of a set of predictor variables. Discriminant analysis is used to identify the variables / statements that are discriminating and on which people with diverse views will respond differently. The mathematical form of the discriminant analysis model is:

$$Y = b_0 + b_1X_1 + b_2X_2 + b_3X_3 + \dots + b_kX_k$$

Where, Y = Dependent variable

bs = Coefficients of Independent variable

Xs = Predictor or Independent variable

The method of estimating bs based on the principle that the ratio of 'between group sum of squares' to 'within group sum of squares' be maximized. This will make the groups differ as much as possible on the values of the discriminant function. After having estimated the model, the b, coefficients are used to calculate Y, the

discriminant score by substituting the values of Xs in the estimated discriminant model. The relative importance of the independent variables could be determined from the standardized discriminant function co-efficient and the structure matrix. A rule of thumb the dependent variable should be nominal or ordinal scale with two distinct parameter. So, the scale statement recorded with two factors namely high QWL perceiving employees and low QWL perceiving employees. Respondents who are selecting the option Strongly Agree, Agree, either Agree or Disagree are treated as Perceiving high QWL and Disagree and Strongly Disagree are treated as perceiving low QWL. Further discriminant analysis has been performed to differentiate between High QWL perceiving and low QWL perceiving employees. For that purpose the factor analysis has been applied and the factor scores are treated as independent variable in discriminant analysis.

The Following Table 1 shows the recorded information about the perception of employees in Private Banks with respect to QWL.

Table 1

Particulars	Number of	
	Respondents	Percent
Employees Perceiving High QWL	115	55.56
Employees Perceiving Low QWL	92	44.44
Total	207	100

From Table 2, it seems to be a difference in the means of the variables like Healthy Working environment, Motivational climate, Productivity, Work Redesign, Sense of accomplishment, Employees' Democracy and Stimulating work environment in the two groups. High QWL perceiving employees scores high on these variables as compare to Low QWL perceiving employees. It may mean that High QWL perceiving employees are more motivated, wants to redesign their working style, working standards, working environment, having more sense of accomplishment etc as compare to Low QWL perceiving.

Table 3 shows the significance of the discriminate model. The value of Wilk's Lambda is 0.478 i.e., 47.8percent of the variables not explained by the group differences. The Wilk's Lambda takes a value between 0 and 1 and lower the value of Wilk's lambda, the higher is the significance of the discriminant function. The statistical test of significance for Wilk's lambda is carried out with



Table 2: Group Statistics

Group		Mean	Std. Deviation	Valid N (listwise)	
				Unweighted	Weighted
Low QWL	Healthy Working environment	28.2391	7.38928	92	92.000
	Motivational climate	11.8261	4.04809	92	92.000
	Productivity	12.6630	3.76005	92	92.000
	Work Redesign	8.8696	3.28572	92	92.000
	Sense of accomplishment	9.4239	3.48697	92	92.000
	Employees' Democracy	5.0217	1.65734	92	92.000
	Want to improve life at work	3.4022	1.16788	92	92.000
	Stimulating work environment	17.0109	5.55985	92	92.000
High QWL	Healthy Working environment	50.2000	9.28421	115	115.000
	Motivational climate	19.4609	5.52552	115	115.000
	Productivity	19.7043	5.31957	115	115.000
	Work Redesign	12.7826	3.45848	115	115.000
	Sense of accomplishment	13.7913	3.24306	115	115.000
	Employees' Democracy	7.0348	1.82541	115	115.000
	Want to improve life at work	3.6261	1.14295	115	115.000
	Stimulating work environment	23.1043	5.77255	115	115.000
Total	Healthy Working environment	40.4396	13.83765	207	207.000
	Motivational climate	16.0676	6.21268	207	207.000
	Productivity	16.5749	5.84865	207	207.000
	Work Redesign	11.0435	3.89710	207	207.000
	Sense of accomplishment	11.8502	3.99050	207	207.000
	Employees' Democracy	6.1401	2.01564	207	207.000
	Want to improve life at work	3.5266	1.15667	207	207.000
	Stimulating work environment	20.3961	6.42716	207	207.000

the chi-squared transformed statistic, which in our case is 106.296 with 8 degrees of freedom (degrees of freedom equals the number of predictor variables) and a P value is 0.000 which is less than the cutoff point 0.05. Therefore that there is a relationship between dependent and independent variables and this shows that our discriminate model is significant.

Table 3 Wilks' Lambda

Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1	.478	106.296	8	.000

In Table 4 testing the equality of groups means was carried out and it was found that the variables like healthy working environment, motivational climate, productivity, work redesign, sense of accomplishment and stimulating work environment are statistically significant. The results are in the tune with the result obtained in Table 2. However, can say with confidence that individually, statistically difference exist in these variables among two groups.

Table 4: Tests of Equality of Group Means

	Wilks' Lambda	F	df1	df2	Sig.
Healthy Working environment	.375	341.546	1	205	.000
Motivational climate	.625	122.843	1	205	.000
Productivity	.640	115.122	1	205	.000
Work Redesign	.750	68.387	1	205	.000
Sense of accomplishment	.703	86.687	1	205	.000
Employees' Democracy	.753	67.416	1	205	.000
Want to improve life at work	.991	1.924	1	205	.167
Stimulating work environment	.777	58.842	1	205	.000

The Eigen values describe the effectiveness of discriminant function. Larger Eigen values indicate that the discriminant function is more useful in distinguishing the groups and canonical correlation indicates a function that discriminates well. The canonical correlation is equal to .807 and its square equals to .6512 which means

65.12% of the variations in discriminating model between a prospective group Perceiving High QWL / perceiving low QWL is due to the changes in the seven predictor variables, namely Healthy Working environment, Motivational climate, Stimulating work environment, Productivity, Work Redesign, Sense of accomplishment, Employees' Democracy, want to improve life at work. (Table 5 Eigenvalues)

Table 5: Eigenvalues

Function	Eigenvalue	% of Variance	Cumulative %	Canonical Correlation
1	1.871 ^a	100.0	100.0	.807

a. First 1 canonical discriminant functions were used in the analysis.

The unstandardized discriminant function can be obtained from the results given in Table-6 Canonical Discriminant Function Coefficients . The equation of discriminate function is

$$D = -5.354 + (\text{Healthy Working environment} * .114) + (\text{Motivational climate} * .056) + (\text{Productivity} * -.040) + (\text{Work Redesign} * -.061) + (\text{Sense of accomplishment} * .018) + (\text{Employees' Democracy} * .011) + (\text{Want to improve life at work} * .044) + (\text{Stimulating work environment} * .038).$$

Table 6: Canonical Discriminant Function Coefficients

	Function 1
Healthy Working environment	.114
Motivational climate	.056
Productivity	-.040
Work Redesign	-.061
Sense of accomplishment	.018
Employees' Democracy	.011
Want to improve life at work	.044
Stimulating work environment	.038
(Constant)	-5.354

Unstandardized coefficients

The standard canonical discriminant co-efficient can be used to rank the importance of variables in the analysis. A high standardized function co-efficient describes that the grouped variables differ a lot among the variables in the group. The following Table 7 shows the standardized canonical discriminant function co-efficient. Table 7 provides an index of the importance of each predictor through standardized regression coefficient. It indicates that Factor Healthy Working environment, followed by Factor Motivational climate, factor Stimulating work environment,

factor Work Redesign are the four variables with large coefficients stand out as those the strongly predict allocation to the High QWL perceiving employees and Low QWL perceiving employees. All the remaining 4 variables are less successful as predictors.

Table 7: Standardized Canonical Discriminant Function Coefficients

	Function 1
Healthy Working environment	.966
Motivational climate	.275
Productivity	-.190
Work Redesign	-.207
Sense of accomplishment	.060
Employees' Democracy	.019
Want to improve life at work	.051
Stimulating work environment	.215

The value of the unstandardized discriminant function evaluated at group means is given in table and is called function at group centroid. The cut off point for classification is obtained by taking the average of the two groups as shown below:

Table 8: Functions at Group Centroids

Group	Function 1
Low QWL	-1.522
High QWL	1.217

Unstandardized canonical discriminant functions evaluated at group means

-1.522	1.217
--------	-------

Low QWL perceiving -0.1525 High QWL perceiving

Now if an employee score is greater than -0.1525, he/she would be classified perceiving high QWL whereas if the score is less than -0.1525 the person will be classified as perceiving low QWL.

Table 9: Classification Results^{a,c}

group	Count	Predicted Group Membership		Total	
		Low QWL	High QWL		
Original	Count	Low QWL	83	9	92
		High QWL	8	107	115
	%	Low QWL	90.2	9.8	100.0
		High QWL	7.0	93.0	100.0
Cross-validated ^b	Count	Low QWL	82	10	92
		High QWL	14	101	115
	%	Low QWL	89.1	10.9	100.0
		High QWL	12.2	87.8	100.0

a. 91.8% of original grouped cases correctly classified.

b. Cross validation is done only for those cases in the analysis. In cross validation, each case is classified by the functions derived from all cases other than that case.



c. 88.4% of cross-validated grouped cases correctly classified.

The classification ability of the model is given in Table 9. It can be seen from Table 9 that out of 92 Low QWL perceiving employees, 83 have been classified correctly. Similarly, out of 115 High QWL perceiving employees, 107 have been classified correctly. The hit ratio is 91.8 % which is reasonably good. The result of cross-validation indicates the accuracy of 88.4%.

5.1 SUMMARY OF FINDINGS

- It was seen that estimated discriminant function was significant and therefore used for further analysis.
- The Healthy Working environment, Motivational climate, Stimulating work environment, Productivity, Work Redesign, Sense of accomplishment, Employees' Democracy were found to be important variables that discriminant between High QWL perceiving employees and Low QWL perceiving employees.
- The hit ratio is 91.8% which is reasonably good.
- The result of cross-validation indicates the accuracy of 88.4%.

6.1 CONCLUSION

QWL is a key indicator of the overall quality of human experience in the work place. Quality of work life is the experience which an employee feels about the job and work place QWL expresses a clear way of thinking about people, their work, and other organization in which their career are fulfilled. QWL establishes a clear objective that high performance can be achieved with high job satisfaction. Unclear targets and objectives and poor communications can contribute to dissatisfaction and eventually lead to poor work performance.

Want to improve life at work was found less important factor of discriminating two groups via High QWL perceiving employees and Low QWL perceiving employees, it may be the reason that every employees whether he/she perceive High

QWL or Low QWL wants to improve life at work. All employees are expecting improvement of working environment from organization.

6.2 LIMITATIONS OF THE STUDY

The current study has certain limitations attached with it. First, the size of sample (207) studied is not considered as large enough to generalize the findings of the study. A larger sample would be more appropriate which may facilitate in validating the findings. Second, the sample has been chosen from different Private Banks in Indore and nearby areas, and so it still needs to be explored whether the findings of this study can be replicated in different sectors and geographical area for further verification and generalization.

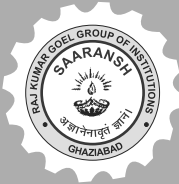
7.1 IMPLICATION AND DIRECTIONS FOR FUTURE RESEARCH

As banking sector is becoming increasingly important to the economies of developed nations, the organization affirm that their employees are the most valuable asset .if employees will perceiving good QWL, and then it is likely that employees will report higher levels of performance and job involvement. In concurrence with the ascertained importance of an employee's role in the service exchange process, therefore, the present research is an attempt to study QWL and found the factors which discriminate between High QWL perceiving employees and Low QWL perceiving employees, where experience help in retain employees and help them towards career development, increasing managerial effectiveness and organization commitment.

Based on the limitation of the study, the suggestions for future research are as under: The study can be extended to identify the pattern of relationship among different dimensions of QWL of Banking sector employees. QWL of other professionals like academicians, BPO employees, insurance sector employees, manufacturing industry employees, IT sector employees and scientists can be explored and compared with that of Banking sector employees.

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Empirical Asset Pricing Models: An Overview

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ABSTRACT

The Capital Asset Pricing Model (CAPM) proposed by Sharpe (1964) and Lintner (1965) has been the most widely used model for a long time. But its failure to capture empirically observed return patterns such as size, debt/equity ratio, book to market equity, price/earnings ratio, past-return and cash-flow to price necessitated the development of linear multi-factor models that allow asset returns to be explained by other factors in addition to the market index. There are three commonly used approaches for determining the number of factors and identifying them and according to the approach being applied the multi-factor models can be classified into three broad categories - Inter-temporal Capital Asset Pricing Model or ICAPM, Arbitrage Pricing theory model or APT model and empirical models. The rationale behind empirical models is that firm characteristics that have been empirically found to affect stock returns are assumed to proxy for some yet unidentified fundamental sources of risk and hence the average risk premium can be decomposed with the help of such factors. This paper provides an overview of the two most popular empirical models – the Fama-French three factor model and the Carhart model and some recently developed ones – the alternative three factor model, the q-factor model and the Fama-French five factor model.

Key words: empirical asset pricing, anomalies, mispricing, out-of-sample evidence, abnormal returns

1. INTRODUCTION

An asset pricing model is a quantified relationship that predicts the expected return on a security as a sum of the risk premiums that compensate for the various dimensions of risk associated with the security. Such financial models have a wide variety of applications – cost of capital estimation, selecting stocks for investment purpose and judging the performance of portfolio managers.

Sharpe (1964) and Lintner (1965) proposed the first asset pricing model, the Capital Asset Pricing Model (CAPM). This single index model remained the standard model of asset pricing over the following three decades. Its uncontested popularity over such a long period can be ascribed to its simplicity of application and its ability to provide intuitively pleasing solutions.

The CAPM postulates that the portfolio returns are normally distributed and the utility function of the investors is quadratic. But these assumptions are restrictive and difficult to justify. Hence, empirical studies on portfolio returns have recorded several anomalies. These anomalies comprises evidence that the market risk alone cannot explain the cross-section of portfolio

returns and several firm characteristics such size (Banz,1981), debt/equity ratio (Bhandari,1988), book to market equity (Rosenberg, Reid and Lanstein, 1985; Stattman, 1980), price/earning ratio (Basu, 1977), past-returns (DeBondt and Thaler, 1985; Jegadeesh and Titman, 1993) and cash-flow to price (Lakonishok, Shleifer and Vishny, 1994) appear to affect portfolio returns. The modified forms of CAPM could only provide partial solutions. The theorists thus attempted to develop a family of asset pricing models called multi-factor models which are founded on less restrictive assumptions in essence that there are no assumptions regarding investor behaviour. These are linear models that allow asset returns to be explained by other factors in addition to the market index.

Determining the numbers of factors and identifying them is a pivotal issue connected to multi-factor models. There are three frequently employed approaches for handling this vital matter and according to the approach being applied the multi-factor models can be sorted into three broad categories. When economic theory is employed to select the factors, the model is termed as Inter-

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temporal Capital Asset Pricing Model or ICAPM (Merton, 1973).

When a statistical approach is used for the factor selection process the resulting model is called Arbitrage Pricing theory model or APT model (Ross, 1976). The third category of model is referred to as empirical models. Instead of presuming that there is an explanatory factorial relationship for returns on the assets in each period 't', they postulate that the average risk premium, can be broken up with the help of factors. The factors that are used in this model are firm characteristics that have been empirically found to affect stock returns. These factors are assumed to proxy for some yet unidentified fundamental sources of risk. Two most popular examples of empirical models are - Fama-French three factor model and Carhart model.

The purpose of this study is to provide an overview of the most popular empirical asset pricing models and some recently developed ones.

The rest of the paper is organised as follows: Each one of the sections from 2 to 6 assimilates the research on an empirical model and section 7 concludes.

2. FAMA FRENCH THREE FACTOR MODEL

This model was proposed by Eugene. F. Fama and Keneth R. French in 1993. Fama and French three-factor model is a multifactor asset pricing model that uses firm characteristic variables – corporate capitalisation (firm size) and book-market-ratio which from long standing observations appear to be predictive of stock returns and therefore may be capturing risk premiums. It is assumed that these variables proxy for yet unknown more fundamental variables.

$$R_{it} - R_{ft} = \alpha_i + \beta_{iM}(R_{Mt} - R_{ft}) + \beta_{iSMB}SMB_t + \beta_{iHML}HML_t + e_{it}$$

The model:

Where,

α_i = measure of abnormal performance or the pricing error of portfolio i

R_{it} = weighted return on portfolio i for period t

R_{ft} = risk free rate of return for period t

R_{Mt} = weighted return on market portfolio for period t

SMB_t = difference between returns on portfolios

of small and big securities for period t

HML_t = difference between returns on portfolios of high and low BE/ME ratio securities for period t

β_M = factor loading of portfolio i for the excess return of the market portfolio over the risk free rate

β_{iSMB} = factor loading of portfolio i on SMB

β_{iHML} = factor loading of portfolio i on HML

e_{it} = error term for portfolio i for period t

Both the SMB and HML factors use independent double 2-by-3 sorts on size and BE/ME.

The researchers have incorporated the market factor in their model to fulfil the need to account for the notable difference between the returns of risky assets (such as stocks) and the risk free rate.

There is an ongoing controversy surrounding the interpretation of SMB and HML factors. There are four competing claims regarding the interpretation of these factors:

Fama and French (1993, 1996, 2012) claim that the size and value premiums are compensation for some unidentified risk factors in the context of an Arbitrage Pricing theory (Ross, 1976) type or Inter-temporal Capital Asset Pricing Theory (Merton, 1973) type model. The set of factor portfolios in this model may span the superior (but not optimal) ex-ante mean-variance efficient tangency portfolio in comparison to the single factor Capital Asset Pricing Model (CAPM). Consistent with this rational pricing argument Fama and French (1995) documented that low profitability is the common risk factor linked to size and BE/ME ratio and there are size and value factors in firms' earnings like those in returns. However, Dichev (1998) reports that distressed firms earn low returns. Similar findings have been documented by researchers like Griffin and Lemmon (2002) and Campbell et al. (2008). Piotroski (2000) has shown that amongst firms having high book-to-market ratio, firms having better fundamentals outperforms the others. These evidences contradict the conviction that HML proxies for distress risk.

The second interpretation is that the positive relation between BE/ME ratio and mean return and negative relation between size and mean return is a chance result that is unlikely to be observed out of sample. This argument which is known as the data snooping hypothesis has been put forward by Black (1993), MacKinlay (1995).



However, their claim has been strongly refuted by plenty of out of sample evidence in favour of value premium (Capaul, Rowley and Sharpe, 1993; Chan, Hamao and Lakanishok, 1991; Davis, Fama and French, 2000; Fama and French, 1998) and size premium (Amel-Zadeh, 2011; Heston et al., 1999). Recent and more comprehensive evidence of size and value effects in international markets have been provided by Fama and French (2012) and Hou et al. (2011).

A third opinion is that value effect is caused by irrational behaviour of investors. Proponents of this view like Lakonishok, Shleifer and Vishny (1994) were of the opinion that value premium is generated as a result of overestimation of future growth rate of earnings, cash-flows etc. of glamour stocks relative to value stocks by investors.

The fourth theory proposed by Daniel and Titman (1997) is that it is not the factor loadings but the characteristics themselves that capture the cross-sectional variation of stock returns. However, Davis et al. (2000) showed that the evidence obtained by Daniel et al. in favour of the characteristics model is observed only in their rather short study period and upheld the claim that value premium is a compensation for a priced risk factor in a multi-factor asset pricing model. In a more contemporary study Chordia et al. (2015) showed that both factor sensitivities and characteristics explain the cross-section of average returns and their relative contribution depends on the factor under consideration.

However, the biggest success of this model is its capacity to explain the relationship between observed return patterns and firm characteristics such as size, BE/ME, earnings/price, past sales growth, cash-flow/price and long term past return which CAPM failed to account for.

In addition there is extensive out-of-sample evidence covering different markets (both developed and emerging) as well as different sample periods which demonstrate the model's power to give a parsimonious description of the cross-sectional variation in average returns.

However, there are some empirically documented return patterns that the Fama and French three factor model fails to capture e.g. momentum (Jegadeesh and Titman, 1993), accruals (Sloan, 1996), net stock issues (Daniel and Titman, 2006; Ikenberry, Lakonishok and Vermaelen, 1995; Pontiff and Woodgate, 2008), liquidity risk (Pastor

and Stambough, 2003), idiosyncratic volatility (Ang, Hodrick, Xing and Zhang, 2009), earnings surprises (Foster, Olsen and Shevlin, 1984; Bernard and Thomas, 1989), financial distress (Campbell, Hilscher and Szilagyi, 2008; Dichev, 1998), asset growth (Cooper, Gulen and Schill, 2008).

Moreover, although several studies have empirically proved that this model has superior explanatory power compared to CAPM it fails to completely capture the abnormal returns left unexplained by CAPM. Particularly the intercepts of portfolios containing small growth stocks are large. In fact, this model fails the formal asset pricing test proposed by Gibbons, Ross and Shanken (1989).

But Cochrane has aptly observed that from the perspective of practical application the capability of the model to explain stylized facts is more important than a table of \div^2 pricing errors.

3. CARHART MODEL

This four factor model developed by M. M. Carhart (1997) is an augmentation of Fama and French's three factor model. The additional factor is momentum, which serves as a measure of persistence of the returns. This factor was added for the purpose of explaining the one-year momentum effect of Jegadeesh and Titman (1993). The model is represented as:

$$R_{it} - R_{ft} = \alpha_i + \beta_{iM}(R_{Mt} - R_{ft}) + \beta_{iSMB}SMB_t + \beta_{iHML}HML_t + \beta_{iWML}WML_t + e_{it}$$

Where, the other symbols have the same meaning as in case of the Fama French three factor model, and,

WML_t = difference between returns on portfolios of winning and losing securities of past year for period t

α_{iWML} = factor loading of portfolio i on WML

The WML portfolios are obtained from independent double 2-by-3 sorts on size and prior 2-12 returns.

However, Carhart has maintained silence regarding possible economic interpretation of the factors comprising the model.

The Carhart model is more successful in capturing the average returns on size-value sorted portfolios compared to the Fama-French three factor model in developed markets (Fama and French, 2012)

but not in emerging economies (Cakici et. al., 2013).

This model is able to account for momentum anomaly in some developed markets including U.S.A (Fama and French, 2012) and emerging markets (Cakici et. al., 2013). But, this success story does not extend to developed markets in Europe and Asia Pacific (Fama and French, 2012), particularly for portfolios with extreme momentum tilts. However such portfolios are rarely encountered in practice (Carhart, 1997; Fama French, 2010), so the failing of this model to work well in extremes of the winners-losers spectrum rarely pose a serious problem in assessing the performance of mutual funds.

Although, for many test portfolios and across various markets this model exhibits better performance compared to the Fama-French three factor model in terms of the GRS test statistic, still this model is not good enough to pass the GRS test.

4. ALTERNATIVE THREE FACTOR MODEL

An alternative three factor model was introduced by Chen Novy-Marx and Zhang (2011) with an aim to provide an explanation for the prominent capital market anomalies which the Fama-French three factor model failed to digest. Their new model consists of the market factor, an investment factor and a profitability factor.

The model is formally represented as:

$$R_{it} - R_{ft} = \alpha_i + \beta_{iM}(R_{Mt} - R_{ft}) + \beta_{iINV}r_{INV,t} + \beta_{iROE}r_{ROE,t} + e_{it}$$

Where, the other symbols have the same meaning as in case of the Fama-French three factor model, and,

$r_{INV,t}$ = difference between returns on portfolios of low and high investment securities for period t

$r_{ROE,t}$ = difference between returns on portfolios of high and low return-on-equity (ROE) securities for period t

β_{iINV} = factor loading of portfolio i on r_{INV}

β_{iROE} = factor loading of portfolio i on r_{ROE}

Investment-to-assets (annual change in gross property, plant and equipment plus annual change in inventories divided by the lagged book value of assets) and return on equity (income before

extraordinary items divided by one-quarter lagged book equity) have been used as proxies for investment and profitability respectively.

The investment and ROE factors are constructed from independent triple 2-by-3-by-3 sorts on size, investment-to-assets and return on equity. The economic rationale behind employing such factor construction procedure is that both the investment effect and profitability effect are conditional in nature and also both these effects have been found to be more pronounced in case of small firms (e.g. Bernard and Thomas, 1989; Fama and French, 2008).

Unlike the empirically motivated Fama and French (1993) factors Chen et al. (2011) derive their asset pricing factors on the basis of q-theory of investment (Cochrane, 1991, 1996; Liu, Whited and Zhang, 2009) which provides an explanation of stock returns from the production side. According to the q-theory, firms with high profitability and low cost of capital will invest aggressively. This means, controlling for investment, profitability and expected returns should be positively correlated. Consistent with these theoretical predictions, empirically the investment effect and profitability effect have been widely documented.

Although Chen et. al.'s (2011) profitability and investment factors are inspired from production perspective; their model also includes the conventional market factor from the consumption side. Since, they remain silent on their motivation behind including this factor it can be assumed that the market factor was meant to serve the same purpose as in case of the Fama-French three factor model.

Besides being based on more economically sound risk factors, both U.S. based (Chen et. al., 2011) and non-U.S. based studies (Amman et. al., 2012; Fan and Yu, 2013;) have documented that this model can either fully explain or better explain some prominent stock market anomalies (such as net stock issues, earnings surprises, idiosyncratic volatility, financial distress, momentum, asset growth, accruals) which the Fama-French three factor model failed to explain.

But, like the classical three factor model proposed by Fama and French, this alternative three factor model is also rejected by the GRS test. In addition, neither there is sufficient number of out-of-sample testing of the model nor does the only one of the



few out of sample evidence covering both developed and emerging markets (Walkshäusl and Lobe, 2014) uphold the superiority of this alternative model over the Fama-French three factor model.

Later, Hou, Xue and Zhang (2015) augmented this model by incorporating a size factor. Since, the q-factors are neutralized against size; the size factor is incorporated in this model. Another rationale for including the size factor is to equalise the number of factors in the q-factor model and the Carhart model. But, adding the size factor leads to only marginal improvement of the performance of the q-factor model over the alternative three factor model from the viewpoint of capturing prominent anomalies in the U.S. market. No out-of-sample evidence of the performance of this model is available.

5. FAMA FRENCH FIVE FACTOR MODEL

The Fama and French three factor model fails to account for the variation in expected stock returns related to profitability and investment that has been widely documented in asset pricing literature. With the aims of capturing the investment and profitability patterns in average stock returns and providing an improved explanation of size and value effects the researchers augmented the model by adding to new factors – profitability and investment in 2015.

Formally, the model is represented as:

$$R_{it} - R_{ft} = \alpha_i + \beta_{iM}(R_{Mt} - R_{ft}) + \beta_{iSMB}SMB_t + \beta_{iHML}HML_t + \beta_{iRMW}RMW_t + \beta_{iCMA}CMA_t + e_{it}$$

Where, the other symbols have the same meaning as in case of the Fama French three factor model, and,

RMW_t = difference between returns on portfolios of robust and weak profitability securities for period t

CMA_t = difference between returns on portfolios of conservative and aggressive investment securities for period t

β_{iRMW} = factor loading of portfolio i on RMW

β_{iCMA} = factor loading of portfolio i on CMA

In this model, operating profits = (sales minus cost of goods sold, selling general and administrative expenses, and interest expense)/book equity and annual growth rate of assets are the proxies for

profitability and investment respectively.

To construct the HML factor the stocks are sorted independently into two size groups and three BE/ME groups. The HML factor is obtained by subtracting the average of the two low book-to-market equity portfolio returns from the average of the two high book-to-market equity portfolio returns. The RMW and CMA factors are constructed in a similar manner except the second sort is on profitability and investment respectively. SMB is the difference between the mean return on the nine small stock portfolios of the three 2x3 sorts and the mean return on the nine big stock portfolios.

The relationship between expected returns and book-to-market equity, expected profitability and expected investment can be derived on the basis of the dividend discount model.

From the dividend discount model the following equation can be derived:

$$\frac{M_t}{B_t} = \frac{\sum_{\tau=1}^{\infty} E(Y_{t+\tau} - dB_{t+\tau}) / (1+r)^\tau}{B_t}$$

Where,

M_t = share price at time t

B_t = book equity at time t

r = long term average expected stock return or more precisely, the required rate of return on expected dividend

$Y_{t+\tau}$ = total equity earnings for period t + τ

$dB_{t+\tau} = B_{t+\tau} - B_{t+\tau-1}$ = the change in total book equity

The above equation has three implications for expected stock returns:

First, when everything in the above equation are held constant except M_t and expected stock return, a lower value of M_t which is equivalent to a higher BE/ME ratio implies a higher expected return. Next, higher expected earning implies higher expected returns for a given value of B_t , M_t and change in total book equity. Finally, higher expected growth in book equity i.e. investment implies lower expected stock return conditional on fixed values of B_t , M_t and expected future earnings.

But, the dividend discount model fails to provide a foolproof economic interpretation of value, profitability and investment factors because it

leaves important questions unanswered. The most prominent one among these unexplained issues is the failure of the dividend discount model to offer any suitable explanation of the failure of the CAPM to capture the value, investment and profitability premiums.

Further, the dividend discount model does not shed light on the vital issue of whether the conditional relationship between BE/ME ratio, profitability, investment and expected return predicted by the model are due to rational or irrational pricing. Although, Watnabe et al. (2013) and Sun, Wei and Xie (2013) indicate that the profitability and investment patterns are generated due to rational pricing the interpretation of their analysis and hence the conclusion is debatable.

However, the model has met with considerable success on the basis of empirical testing. It has been found to provide a better parsimonious description of the cross-section of average stock returns in countries outside U.S.A. (Fama and French, 2017; Chiah et. al., 2015). But more out-of-sample testing is necessary to validate the claim in general.

Even this model is unable to pass the GRS test unequivocally. Also there is contradictory empirical evidence regarding the redundancy of the HML factor. However, the major limitation of this model is its inability to account for the low average returns on small firms whose returns resemble those firms which invest aggressively despite low profitability.

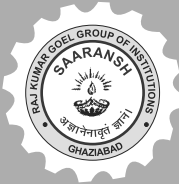
6. CONCLUSION

On the basis of the above discussion on the various empirical asset pricing models it is obvious that even if such a model is found to work well in practice, as long as the factors comprising the model under consideration is not empirically validated as the model's state variables in the

context of ICAPM, the possibility that the observed factor premiums are generated due to mispricing cannot be ruled out. As highlighted by Cochrane (2011), another major challenge facing the researchers in this field is to dissect the explanatory power of the proposed empirical models into two portions – one that arises due to covariance (the risk part) and the other which originates from characteristics. Hence, many academicians are sceptical regarding this category of models and advocate the use of theory based asset pricing models. However, the theoretical asset pricing models developed till date (CAPM, APT and ICAPM) all suffer from serious limitations from the point of view of practical application. Although, the perfect solution to the asset pricing puzzle would be a theoretical model which can explain all the observed prominent patterns in expected stock returns, from last five decades of research in this field it is evident that this task is extremely challenging and the wait for such an ideal model is expected to be quite long. So, in the meantime, as pointed out by Huberman and Kandel (1987) and Gibbons, Ross and Shanken (1989) it seems reasonable to search for factor-based empirical asset pricing models which consist of a small set of factor portfolios that spans Markowitz's (1952) mean-variance efficient tangency portfolio and hence give a parsimonious description of the cross-section of expected returns. Although, complete success, i.e. an empirical asset pricing model which can capture all the stock market anomalies with the help of a few explanatory factors is certainly impossible, the current thrust in asset pricing research is towards developing and testing empirical robustness of empirically motivated asset pricing models that can explain maximum number of observed patterns in the cross-section of expected stock returns with the help of minimum number of explanatory factors.

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The Impact of Participative Leadership Style on Job Performance and Self Efficacy

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Asha Rani**

ABSTRACT

Education sector plays an indispensable role in accelerating the economic growth and development across all countries. The growth of the education sector and its contribution to income & employment generation are the indices of progress. This research paper focuses on examining the impact of participative style on job performance and self- efficacy. The model has been tested in the service sector (call centres). Information regarding participative style, job performance and self- efficacy has been procured from call centre employees. Data Collected were purified and validated by applying Exploratory Factor Analysis (EFA) & Confirmatory Factor analysis (CFA). Reliability and validity were also assessed by applying techniques like Composite reliability, Convergent Validity and Discriminant Structural Equation Modelling was used to test the hypothesised relationship. The first path in the SEM model exhibited that participative style positively influences job performance. The next path reflected that participative style significantly & positively influences self- efficacy. In particular, the research findings provide an insight into the importance of accepting and implementing participating leadership style necessary for improving their relationship and enhancing job performance and self-efficacy. The study results indicated that employees are the pivot pillars of the service sector and plays an important role in enhancing the performance at individual and organisational level. Therefore, it is suggested that leader should provide enough opportunity to their employees for participating in decision making process as it builds strong interrelationship among them.

Key Words: Participative leadership style, job performance, self-efficacy and structural equation modelling

INTRODUCTION

Today, peoples across nations are adopting different leadership roles in the society and they might carry these roles and responsibilities in a different manner, which draw attention from academicians, managers & researchers. Moreover, successful leadership is related with the persuasive source of executive development and continuous realistic improvement for enhancing organisational performance. Leadership styles are the patterns of behaviour used by leaders in order to influence satisfaction and performance of employees working in different service sectors. leaders adopt an assortment of leadership styles for maintaining quality relationship with their employees (Jong & Hartog, 2007). Leaders develop and adopt different leadership styles as per their qualification, training & experience in order to sustain healthy leader member exchange relationship, which enhances employee job satisfaction and employee performance (Maqsood, Bilal, Nazir & Baig, 2012). Participative

leadership style adopted by leaders in service organisation is regarded as a prerequisite that plays a significant role in enhancing the satisfaction & performance of the employees in the organisation (Timothy, Okwu, Akpa & Nwankwere, 2011). Participative style involves the redistribution of power & authority between employees and managers to encourage employee involvement in decision-making process (Bhatti, Maitlo, Shaikh, Hashmi & Shaikh, 2012). This style is also known as democratic style in which the leader helps, assist and provide guidance to their employees while performing the various task of the organisation. Moreover, it is generally associated with consensus, consultation, delegation and involvement of employees (Yaseen, 2010). The present research study, therefore proposes a research framework with two main objectives:

1. To examine the impact of participative leadership style on job performance.

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2. To investigate the impact of participative leadership style on self-efficacy.

REVIEW OF LITERATURE AND HYPOTHESES DEVELOPMENT

Leadership is considered as a major factor that influences the performance of organisation, managers & employees. The quality of the leader-employee relationship has a great influence on the employees' self-esteem and employees' satisfaction. Participative leadership style as compared to other styles has a stronger & positive effect on employees' attitudes towards their job, their job environment which ultimately affects employees work performance (Ali & Haider, 2012). This leadership style also raises the employees' awareness about their need to grow, validates their self-expression and motivates them to perform at new and higher levels. Participative style will be more effective than other styles to obtain employee's job satisfaction and show more concern for employees' problems at work (Yaseen, 2010). The aforementioned studies provide us with valuable insights into the impact of various participative leadership styles on the performance and self-efficacy of employees. Thus, the hypotheses formulated are:

H₁: Participative leadership style significantly affects job performance.

H₂: Participative leadership style significantly affects self-efficacy.

On the basis of aforesaid literature, the proposed theoretical models developed (Fig. 1) is as under:

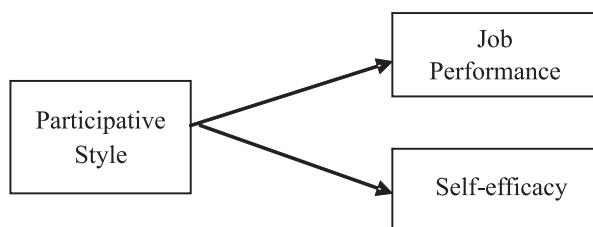


Figure 1: Proposed theoretical model

RESEARCH DESIGN AND METHODOLOGY

Data collection

Economies world-wide are experiencing a shift from manufacturing to knowledge based service industries, call centres have become an important

part of the service industry. They are on the increase not only in numbers, but also in size. Call centres, like other services have become one of the highly competitive sectors in India, providing adequate opportunities as well as motivation for the employees by fostering a supportive and favourable climate for learning in the organisations. The employees' behaviour in call centre is product of continuous feedback, coaching and teaching of team leaders, setting and communicating clear and measurable goals, building a positive and creative team environment, giving consistent recognition of good behaviour through verbal praise and incentives, bonus or rewards programs, consistent and fair evaluation of employee productivity and performance. This is made possible by the due efforts of the team leaders who act as role model, motivator, coach and problem solver (Centerserve Report, 2008). So, call centre employees have been selected as our respondents. The population for the study comprised eleven hundred fifty seven employees working in the two leading call centres namely, Airtel and Aircel in Jammu & Kashmir (India). All of these employees were contacted to generate research information. Only 202 employees gave the required response (17.45%). Data has been collected from multiple respondents to avoid the problem of common method variance. Questionnaire technique has been used for data collection.

Further, the data were checked for normality through inspection of Box plots, which revealed 12 outliers that were excluded from the sample (Hair et al., 2009, p.69). The value of skewness (0.158) and kurtosis (0.642) established the normality of the data (Hair et al., 2009, p.104). Thus, 190 complete data sets of matched responses were used for the analysis.

The demographic information included gender, age, experience and qualification. Sixty eight per cent respondents were male and thirty two were female. Most of the respondents (90%) were between 20-30 years of age and ten per cent were above 30 years. Majority (60%) of respondents were undergraduate, thirty percent were graduates and ten per cent were post graduate. Further, most of the respondents (68.5%) had 1-2 years of experience, twenty- four per cent of respondents had experience between 2-3 years and 7.5% were between 3-4 years of experience.

Generation of Scale Items

Literature has been reviewed in order to generate items pertaining to different dimensions of leadership styles, job performance and self-efficacy. The construct Participative style comprises of Bhatti, Maitlo, Shaikh, Hashmi & Shaikh (2012); Yassen (2010). Job performance consisted of three factors i.e. contextual performance (6 items, Motowidlo & Van, 1994), task performance (4 items, Goodman & Svyantek, 1999) and Assignment specific performance (4 items, Caligiuri, 1997). Self-efficacy has been adopted from (7 items) Riggs et al. (1994)

RESULT

The two hypothesised framed are tested by using Confirmatory factor analysis and Structural Equation Modelling. CFA was applied in order to assess the proposed measurement model fit and SEM was used to assess the theoretical relationship.

Exploratory Factor Analysis

Exploratory factor analysis has been conducted to know the factor structure of the each scale as some of the sale are self generated namely, participative leadership style, job performance and self-efficacy. The result revealed that After applying factor analysis the construct participative style got converged into two factors and all the items fulfilled the threshold criteria of anti image value, communality extracted and factor loading (above 0.5). Similarly The application of EFA using varimax rotation on job performance helped in the identification of two factor viz., ‘task performance’ and ‘contextual performance’. Lastly Application of EFA on self efficacy resulted into one factor solution. Detailed results are shown in table 1.

Table1: Summary of Exploratory Factor Analysis: Mean, Standard Deviations, Variance Explained (VE) and KMO Value

Constructs	Mean	Standard deviation	V.E (%)	KMO Values
Participative leadership style	3.88	.786	70	0.751
Job performance	4.22	.555	75	0.861
Self-efficacy	4.21	.538	73	0.806

Confirmatory Factor Analysis

CFA has been conducted to validate different

constructs on the basis of factor that emerged during EFA. The result revealed that application of CFA on participative leadership style resulted into deletion of two items due to low SRW. After deletion the model yielded a good fit (Table 2). Job performance resulted into two factor namely, task performance and contextual performance in EFA. After applying CFA one of the items got deleted due to low SRW value (pl2). After deletion the model yield perfect model fit indices, which is presented in table 2. Application of CFA on self-efficacy resulted in deletion of one of the item and yielded good fit indices. Further reliability and validity got established as Cronbach alpha value for both the factors are within the desired limit (Table 4). Convergent validity also got established as AVE and factor loadings are above 0.5 (Table 4). Discriminant validity has been proved as the squared root of average variance extracted is higher than the correlation matrix (Table 3).

Table 2: Summary of Model Fit Indices

Constructs	χ^2/df	RMR	GFI	AGFI	CFI	NFI	RMSEA
Participative leadership style	3.018	0.049	0.961	0.926	0.955	0.936	0.072
Job performance	2.952	0.018	0.980	0.947	0.968	0.954	0.070
Self-efficacy	3.052	0.020	0.988	0.954	0.975	0.964	0.072

Table 3: Discriminant Validity and Correlation Analysis

Constructs	Participative leadership style	Job performance	Self-efficacy
Participative leadership style	0.97		
Job performance	.220**	0.90	
Self-efficacy	.236**	.422**	0.90

*Note. Values on the diagonal axis represent the square root of average variance extracted. Values below the diagonal axis are correlation **p< 0.01*

Table 4: Reliability and Validity Analysis

Constructs	Standardised Regression Weight	Average Variance Extracted	Composite Reliability	Cronbach's alpha
Participative leadership style		0.95	0.98	
Consultative decision making	0.53			0.782
Mutual understanding	0.91			0.792
Job performance		0.82	0.96	
Task performance	0.85			0.779
Contextual performance	0.88			0.748
Self-efficacy		0.81	0.94	.758

HYPOTHESIS TESTING

Impact of Participative Leadership Style On Job Performance

Structural Modeling was used to assess the hypothesised relationships. Participative decision making approach means aiding the dialogue, encouraging employees to contribute towards ideas and processing all the accessible information to the finest verdict and play very important role in employee's job satisfaction (Maqsood, 2012).

Fig. 1 shows that participative leadership style has a significant & positive impact on job performance of the employee as $SRW= 0.96$, $p<0.001$. When

employees are free to play their roles and perform their duties and responsibilities, it results better performance. Similar positive associations are also concluded by Mansoor & Bilal (2012) and Mester, Visser, Roodt & Kellerman (2003).

Impact Of Participative Leadership Style On Self-Efficacy

The result revealed that participative leadership style significantly affects self-efficacy as revealed by P-value less than .05 ($SRW= 0.74$, $p>.001$). The rationale can be that an effective leader has a responsibility to provide guidance, direction and share the knowledge which boost their confidence and enhanced their self-efficacy.

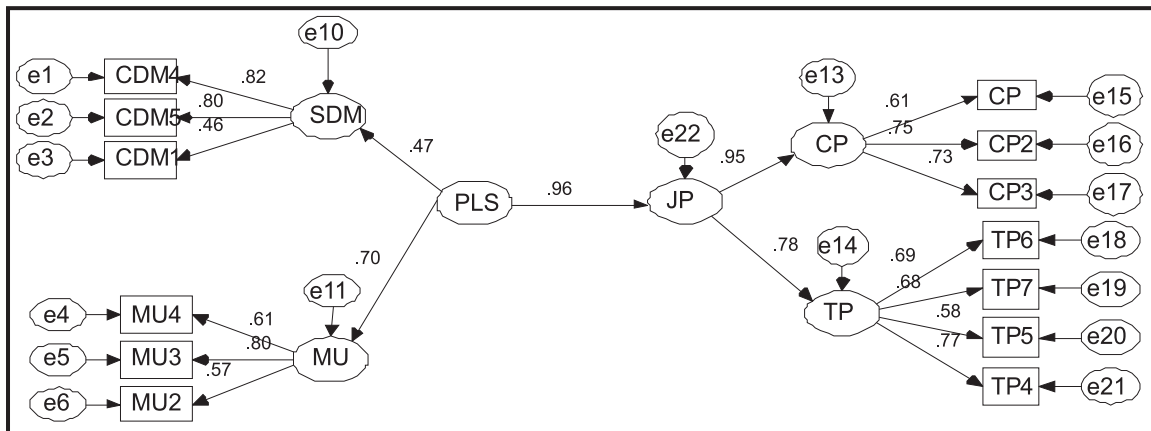


Figure 1: Impact of Participative Leadership Styles on Job Performance

Keywords: PLS- Participative leadership style, ES- Employee performance, CDM (Consultative decision making), MU (Mutual understanding), JP- job performance, CP- contextual performance, TP- task performance, e1-e6 are the error terms.

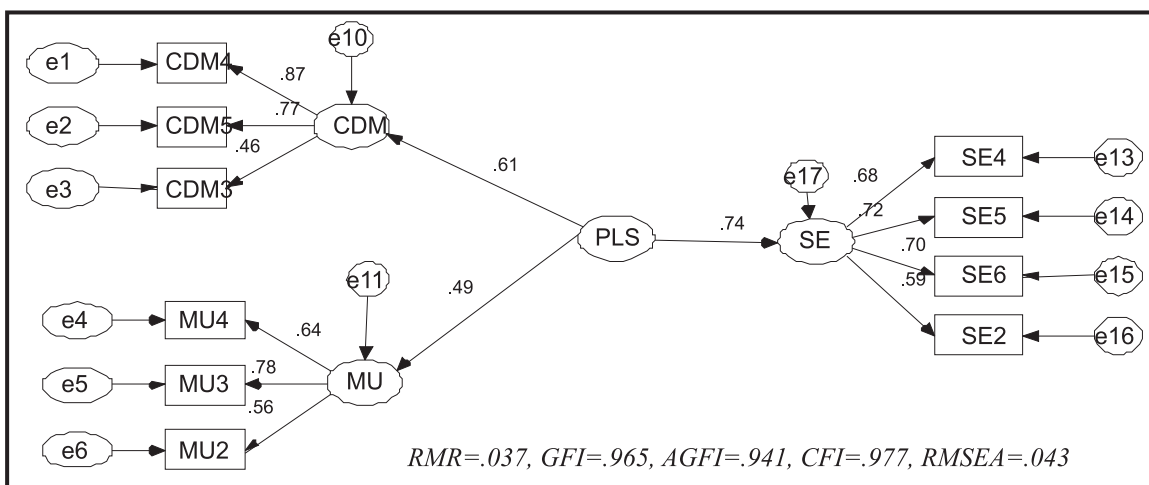


Figure 1: Impact of Participative Leadership Style on self-efficacy

Keywords: PLS- Participative leadership style, CDM (Consultative decision making), MU (Mutual understanding), SE- self-efficacy, e1-e17 are the error terms.

CONCLUSION

The purpose of the current study was to investigate the impact of participative leadership style on job performance and self-efficacy of the employee. From the above research findings, it has been found that participative leadership style help in gaining self-confidence in employees' behaviors, which enhances their self-efficacy. Further now-a-days leaders usually keep their employees informed about various recent developments occurring. Leader serves as a channel of communication for new information to the employee. A self efficacious employee is able to grasp this information in better way due to his intellectual capabilities. If there is any confusion regarding any aspect the efficacious employee is able to clarify the same without any hesitation in better manner. This ultimately enhances employees' self-efficacy.

Finally, the study highlighted that the performance

of employees is significantly affected by the appropriate adoption of leadership style. The present study also proves that employees working in call sector are provided with the opportunity to participate in decision making process, which boost their ability and potential and hence enhance their performance

LIMITATION AND FUTURE RESEARCH

The present research study covers only one style of leadership i.e. participative leadership style and its impact on job performance and self-efficacy. Future study could consider the impact of other leadership style namely, transformational style, transactional style on employees' performance outcomes. The study is confined to call sector only; other service sector like banking, health care can be undertaken in future.

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Investigating Factors Impacting Adoption of Mobile Services: An Indian Perspective

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ABSTRACT

Adoption rate generally defines the success or failure of any service. Internet services have become widespread driven by the advent of mobile data technologies, but their penetration level for developing countries like, India is still far from the reach of ordinary citizen. Internet is assumed to be highly instrumental in bridging the economic disparity. International organisations considered the availability of internet services to be a key that enhance the level of competitiveness and sustain economic growth for many countries. It has thereby become essential to gauge and predict the antecedents that can act as catalyst in the adoption of internet services. This study laid down special emphasis on finding the factors that will help in accelerating early adoption and mass diffusion of mobile internet services with specific reference to Indian context. Based on various theoretical models and studies regarding mobile internet adoption, this study postulates that behaviour intention to adopt mobile internet is influenced by several independent factors, which can be categorised as Attitudinal, Normative and Control constructs. A total of 523 cases were analysed. The step-wise regression method was used to eliminate the effect of correlation between independent factors (multicollinearity problem) and the regression test proved that six constructs i.e. Relative Advantage (RA), Utilitarian Outcomes (UO), Hedonic Outcomes (HO), Primary Influence (PI), Requisite Knowledge (RK) and Facilitating Conditions (FC), had a significant impact upon the behavioural intentions when adopting mobile internet services. No significant difference was noticed while adopting the internet services on the basis of gender, education, age, and occupation.

Keywords: Data Services, Mobile internet, Adoption, Digitisation

1. INTRODUCTION

Internet continues to be a space of rapid innovation, particularly in patterns of access and use. It has impacted every aspect of human life; be it agriculture, healthcare, education, banking or governance. Internet is also assumed to be significantly instrumental in bridging the economic disparity (Paltridge, 2003; Qiang et al., 2009; Thompson and Garbacz, 2011). The development of wireless communication has proceeded rapidly from Morse code to the latest wireless technologies. Mobile phones have become interactive devices capable of managing several aspects of people's lives and could arguably be described as indispensable. Wireless and internet technologies have presented themselves as a powerful tool that breaks the barriers between time and space. With the introduction of high-speed digital wireless technologies, it is possible to deliver audio, video and information to wherever

and whenever needed.

Mobile phone technology has been diffused around the world faster than any other communication technology, witnessed by a rapid growth in the mobile cellular market. The options of different revolutions can all be categorised under the umbrella of Universal Mobile Telecommunications System (UMTS). The development of mobile networks can be divided into six generations: (0G), where only voice data was transmitted, to the fifth generation (5G) where mobile phones have become interactive devices capable of managing several aspects of peoples' life.

Mobility becomes the lifeblood of our daily life and the introduction of mobile internet access has completely transformed the way of living. Interplay of magic words *Mobile* and *Internet* comes from *wireless internet*. The hot words wireless and internet invented in 2003 were only the marketing

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term for wireless networking. That time technology was pricey and a bit unreliable. But now it has become cheaper and standardised leading to phenomenal growth in mobile internet usage. The launch of Next Generation Networks (NGN) and high-speed internet services was the game changer, because the creation of NGN exactly deals with providing high speed internet access to as much customers as possible. A high-quality telecommunication infrastructure enables the people to interact more easily and efficiently, resulting in decrease in transaction costs (Norton 1992).

Despite the internet being key enabler of the industrial revolution, just 51.7% people has access to internet and around half of the world population is internetless. According to InternetLiveStats estimate of 2017, Indian telecom industry reached to second most internet users (462 million) base, which represents 13.5% share of the total world internet users. Despite this progress, formidable challenges remain; even if recent trend continues at their current course and speed, 1326 million individuals will still lack access to the internet in 2018 too. Also, among the top 10 countries, India is the one with the lowest penetration level of 34.4%. Evidences from prior studies shows that states with developed communication network have recorded better economic development than those who have failed to do so (Qiang et al., 2009; Katz et al., 2010). Communication facilities are considered as human need of the day and believed that it is not just a human need but has become a right now.

Connectivity is now a necessity and we are soon arriving to a future where all services will be delivered via digital channels, mostly through mobile applications. Indian internet economy is growing rapidly and studies involving internet connections have revealed a link between internet penetration and economic growth. Many studies have verified the positive impact of internet penetration on the growth of GDP (Hubacek et al., 2007). One of the first, World Bank research concluded that with every 10% point improvement in internet penetration increases the GDP by 1.3%. Also, according to International Telecommunication Union (ITU) study, which included a review of previous researches, showed that for every 10% increase in penetration, the contribution to GDP growth ranged from 0.25% to 1.38%. Recent researches also highlight a

positive relationship between the application of digital technologies and the quality of life.

2. PROBLEM IDENTIFICATION AND THEORETICAL FRAMEWORK

This study investigates the most influential factors contributing towards the growth of mobile internet services in Indian context and analyse the effect of these factors toward mobile internet growth. Technology adoption is one of the matured areas of research in IS/IT services and factors affecting the adoption of various technologies have been the subject of interest for researchers. Various theoretical models employing users' intention to use IS/IT services, some of the most commonly used models include; the Diffusion of Innovation Theory (DOI) by Rogers, (1962); the Theory of Reasoned Action (TRA) by Fishbein and Ajzen, (1975); the Theory of Planned Behaviour (TPB) by Ajzen, (1985); the Technology Acceptance Model (TAM) by Davis, (1989); Unified Theory Acceptance and Use of Technology (UTAUT) by Venkates et al. (2003); and the Model of Adoption of Technology in Households (MATH) by Venkatesh and Brown, (2005). The previous literature concerning the adoption of internet from users prospective utilised these models to identify the catalyst factors.

Indian mobile sector has developed a sustained momentum, aided by higher subscriber volumes, lower tariffs and falling handset prices. There had been a major push in mobile services for the poor and rural areas of the country. Despite huge growth and potential for further growth, the Indian telecom operators continued to face several challenges. Telecom operators are struggling to maintain high ARPU (Average Revenue per User) levels. ARPU can be described as the revenue billed to the customer each month for usage, including the revenue generated from incoming calls, payable within the regulatory interconnection regime, although penetration has increased but ARPU declined.

As mobile subscription has spread from the less price-sensitive business and high-end consumer market into the mainstream of Indian society, the average value of a subscriber has inevitably declined. The Indian telecom industry is going through an acute financial crisis, which has triggered several mergers and acquisition (Idea and Vodafone). There is an urgent need of

correction in ARPU, since service providers are facing challenges that prevent them from investing in the development of forward-looking internet infrastructure. There is a consensus in India and worldwide that the revenue from voice calls is slowly reaching saturation; hence mobile service providers are looking for other sources of revenue from their new and existing customers. While reviewing literature on internet adoption, it is observed that a growing body of service providers are looking mobile internet services as an opportunity to fight against declining ARPU and to increase overall revenues. This study intends to fill the gap about understanding and analysing the key determinants of mobile internet adoption, since the absence of accurate information on factors that influence the consumer behavioural intention to adopt or use internet services could mislead the service providers into adopting unhelpful solutions and that strives to accelerate the implementation of internet services.

Based on the literature reviewed regarding internet adoption studies, this study postulates that Behaviour Intention to adopt mobile internet is influenced by several independent variables, which can be categorised according to MATH framework into three broad categories: attitudinal factors, normative factors and control factors (Dwivedi et al., 2006). Since very few studies have examined the mobile internet adoption in developing countries, it was decided to include all the possible and appropriate constructs (within the Indian context) from previous studies. This includes attitudinal factors (Relative Advantage, Utilitarian Outcome, Hedonic Outcome, Social Outcome and Service Quality), normative factors (Primary Influence and Secondary Influence) and control factors (Self-Efficacy, Declining Cost, Facilitating Conditions, Perceived Ease of Use and Requisite Knowledge) that influence adoption and usage of mobile internet in India.

The relationships between independent variables (RA, UO, HO, SO, SQ, PI, SI, SE, DC, FC, PEU and RK) and dependent variable (BI) were established in this study. This study is empirical in nature as the research is based on the measurement and quantification of data. A survey using structured questionnaire was considered suitable for collection of primary information from the targeted population, as it allows objective data to be collected in a standardised way. According to Saunders et al., (2009) survey is a preferred

type of data collection procedure, because of its ability to collect large amount of data from a population and it is economical to perform.

3. RESEARCH DESIGN

The target population of this study includes districts namely; Mahendergarh, Rewari, Gurgaon, Mewat and Faridabad from the Southern Haryana, India. The targeted population represents various levels of demographic characteristics and spread across a wide geographical area. The selected area is densely populated with a population of approximately 6220254 people (Census, 2011). While constructing the adoption framework, mobile internet has been considered as an experience goods. Nelson coined the term “experience goods” to describe those goods that are best, or preferably, evaluated through experience rather than search (Nelson 1970). Keeping in mind the characteristics of experience goods only the consumers of mobile internet services were considered for this research survey.

As this study attempted to cover wide geographical area for the survey, in order to gain information from a diverse range of respondent’s characteristics, non-probability quota cum convenience sampling method was considered appropriate. Then convenience sampling was used to select the required number of respondents from each stratum. For this purpose 1000 respondents were selected. In the light of the difficulty in obtaining any formal information about the population, the selection of the target population was made as per the availability of those people who have adopted and currently using the mobile internet services. The attempt has been made to obtain samples covering various demographic backgrounds in order to reduce the sampling bias caused by user characteristics.

To collect representative data from the target population within limited time, a self-administered instrument was used for primary survey. To develop the survey instrument, existing validated scales were adopted, wherever possible. Changes were made to re-word items and in some cases, items were dropped that were possibly ambiguous (Moore and Benbasat, 1991). The measurement instruments based on the constructs of DOI, TRA, TPB, TAM, MATH and UTAUT models and theories have long been used in previous research and



shown high reliability and validity. The instrument used in this study is mainly adapted from previous related researches with some amendments made to suit the context of this study that includes; Davis, (1989); Moore and Benbasat, (1991); Parasuraman et al., (1991); Compeau and Higgins, (1995); Taylor and Todd, (1995); Venkatesh and Davis, (2000); Venkatesh and Brown, (2001); DeLone and McLean, (2003); Rogers, (2003), Venkatesh et al., (2003); Brown and Venkatesh (2005); Dwivedi et al., (2007).

The final instrument was divided into two broad categories, part 'A' comprises of 38 questions designed to address the issues related to mobile internet adoption. Each question has a statement with 5-point Likert scale ranging from "1-Strongly disagree" through "Neutral" to "5-Strongly agree". Whereas part 'B' consisted of information related to demographic characteristics. It is believed that user intention would be influenced by the interfering factors such as gender, age and experience (Venkatesh et al., 2003), hence these factors were included under demographic characteristics. In the current study, besides these demographic variables, it is assumed that education level and occupation may have effect on consumer's behavioural intention to adopt mobile internet services.

4. PRE-TESTING AND PILOT STUDY

The instrument testing procedure was followed into two stages, including the pre-testing and pilot testing. A pre-testing of instrument was done with the help of fifteen experts, comprising of Research and Development (R&D) heads, General Managers (GM), Deputy General Managers (DGM), Senior Managers and Managers associated with different telecom industries operating in India. The purpose of the pre-testing was to obtain feedback from the experts and ensure the content validity of the instrument by examining the relevance of the item variables. The results confirmed agreement among the experts that the content validity of the item variables was relevant and appropriate to the industry standards. Based on the reviewer's feedback, some of the items were dropped and the instrument layout out was further modified. Some wordings of items, including professional terminologies were changed to improve the content clarity. The next

phase of the research design was to progress for the pilot study. Instrument for pilot study was developed after incorporating the suggestions and feedback received from the experts.

Prior to administering the final instrument, the pilot study was carried out on 100 mobile internet users. Data were collected from the students, research scholars and faculty members from the institutes of higher learning at national level. Based on the pilot study, it appeared that the survey took approximately 18-22 minutes for each respondent to complete the questionnaire. No items appeared problematic to the respondents and the wording of questions was also found clear and easy to understand. The pilot study coefficient alpha (α) results revealed that all values for reliability estimates computed were ranging from 0.776 to 0.953, thus confirming acceptable internal consistency reliability and evidence of content and construct validity.

5. PRIMARY SURVEY

The final instrument was printed in hardcopy and was administered to the targeted respondents of mobile internet users. At the same time, survey instrument was also made available on the internet and was emailed to the subscribers to answer the web survey on Google forms by providing the link in the cover email. The survey was conducted over the course of 10 weeks during 2017, visiting key business areas where it was likely that a large number of mobile internet users could be found like; universities, research institutes, companies, shopping malls, bus stands and railway stations. Prior to the respondents voluntarily taking part in the study, a covering letter was presented to inform every respondent about all aspects of the research such as the research purpose, objectives and procedures. In addition, confidentiality and anonymity were ensured so that all respondents were protected from harmful and undesirable consequences that might have occurred after the data collection process.

6. DATA ANALYSIS AND DISCUSSION

The quantitative data collected through instrument were analysed using SPSS (version 22). Prior to the analysis each questionnaire was carefully edited, coded and then recorded in the sheet in SPSS. The values of the Likert scale were coded

with 1 being 'Strongly disagree'; 2 'Disagree'; 3 'Neutral'; 4 'Agree' and 5 being 'Strongly agree'. The quantitative method requires measurement instrument to be tested for validity and reliability. Analysis of the internal reliability coefficient alpha (α) values revealed that of the 13 constructs, six possessed excellent reliability > 0.9 and the remaining seven demonstrated high reliability > 0.8 (Refer Table-1).

Table-1: Measurement of Reliability

Construct	No. of Items	Reliability (Cronbach's Alpha)
Behavioural Intention (BI)	2	0.915
Relative Advantage (RA)	2	0.901
Utilitarian Outcomes (UO)	6	0.893
Hedonic Outcomes (HO)	2	0.833
Social Outcomes (SO)	2	0.891
Service quality (SQ)	3	0.919
Primary Influence (PI)	2	0.856
Secondary Influence (SI)	2	0.904
Self-Efficacy (SE)	3	0.844
Declining Cost (DC)	3	0.839
Facilitating Conditions (FC)	4	0.923
Perceived Ease of Use (PEU)	4	0.925
Requisite Knowledge (RK)	3	0.832

7. DISCUSSION USING FACTOR ANALYSIS

In order to test the adequacy of the sample induced by the process of survey instrument, Kaiser-Meyer-Olkin Test and Bartlett test of Sphericity were conducted. The results, shown in Table-2, suggest that the significance value of

Bartlett's Test of Sphericity is 0.00 and is less than 0.05 which stipulates that there is relationship between the constructs and data is acceptable for factor analysis. Moreover, KMO value of 0.840 is well above the recommended acceptable level (0.50). The result indicates that data set is highly suitable for factor analysis.

Table-2: KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy. 0.840		
Bartlett's Test of Sphericity		
Approx. Chi-Square	12437.213	
Df	630	
Sig.	0.000	

Table-3 shows that the cumulative percentage of variance explained by the 12 factors obtained is 80.63 percent. In a simpler form of explanation, more than 80 per cent of the common variance shared by 36 items could be explained by these 12 factors. Total variance explained (80.63 percent) by these 12 factors exceeds the 60 percent threshold commonly used in social sciences (Hair et al., 2006); proves a perfect construct validity. The Eigenvalue for the 12 factors is more than 1.0 (9.089, 3.273, 2.441, 2.193, 1.992, 1.908, 1.737, 1.437, 1.355, 1.325, 1.208 and 1.069).

The rotated component matrix (Table-4) illustrates that 36 items from 12 independent variables are clustered into 12 factors. These factors were named: Factor-1 as Utilitarian Outcomes (UO), Factor-2 as Perceived Ease of Use (PEU), Factor-

Table-3: Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	9.089	25.247	25.247	9.089	25.247	25.247	4.243	11.787	11.787
2	3.273	9.092	34.339	3.273	9.092	34.339	3.313	9.203	20.99
3	2.441	6.78	41.118	2.441	6.78	41.118	3.099	8.609	29.6
4	2.193	6.092	47.211	2.193	6.092	47.211	2.638	7.329	36.928
5	1.992	5.534	52.745	1.992	5.534	52.745	2.356	6.544	43.472
6	1.908	5.299	58.044	1.908	5.299	58.044	2.294	6.373	49.845
7	1.737	4.825	62.869	1.737	4.825	62.869	2.289	6.359	56.204
8	1.437	3.991	66.86	1.437	3.991	66.86	1.816	5.043	61.247
9	1.355	3.764	70.625	1.355	3.764	70.625	1.78	4.945	66.192
10	1.325	3.68	74.304	1.325	3.68	74.304	1.747	4.853	71.045
11	1.208	3.356	77.661	1.208	3.356	77.661	1.727	4.798	75.843
12	1.069	2.97	80.631	1.069	2.97	80.631	1.724	4.789	80.631

Extraction Method: Principal Component Analysis.

Table-4: Rotated component matrix

Rotated Component Matrix

	1	2	3	4	5	6	7	8	9	10	11	12
UO1	.829											
UO6	.790											
UO2	.766											
UO5	.750											
UO3	.749											
UO4	.699											
PEU4		.921										
PEU3		.912										
PEU1		.893										
PEU2		.868										
FC4			.844									
FC3			.840									
FC1			.747									
FC2			.718									
SQ2				.897								
SQ1				.869								
SQ3				.868								
SE3					.866							
SE2					.857							
SE1					.846							
DC3						.877						
DC2						.870						
DC1						.854						
RK2							.876					
RK3							.814					
RK1							.783					
SI1								.913				
SI2								.902				
SO2									.910			
SO1									.903			
PI2										.898		
PI1										.852		
RA1											.872	
RA2											.864	
HO1												.893
HO2												.880

3 as Facilitating Conditions (FC), Factor-4 as Service quality (SQ), Factor-5 as Self-Efficacy (SE), Factor-6 as Declining Cost (DC), Factor-7 as Requisite Knowledge (RK), Factor-8 as Secondary Influence (SI), Factor-9 as Social Outcomes (SO), Factor-10 as Primary Influence (PI), Factor-11 as Relative Advantage (RA) and

Factor-12 as Hedonic Outcomes (HO) sorted according to their own factor loading in their respective components.

All twelve constructs were loaded only one factor, without any cross loading of value greater than 0.5, hence none of the item required removal from this study (Hair et al., 2006).

8. REGRESSION ANALYSIS

The regression analysis was performed with behavioural intention (BI) as the dependent variable and a total of 12 variables including Relative Advantage (RA), Utilitarian Outcomes (UO), Hedonic Outcomes (HO), Social Outcomes (SO), Service quality (SQ), Primary Influence (PI), Secondary Influence (SI), Self-Efficacy (SE), Declining Cost (DC), Facilitating Conditions (FC), Perceived Ease of Use (PEU) and Requisite Knowledge (RK) as independent variables. A total of 523 cases were analysed. The step-wise regression method was selected to eliminate the effect of correlation between independent variables (multicollinearity problem) and finds the variables that are directly affecting the dependent variable. The final model selected in sixth steps (Table-5), the coefficient of determination and the adjusted coefficient of determination are the largest (Adjusted R-Square=0.486). "R" stands for multiple correlation coefficient with respect to selected Model-6 was 0.702. The R Square depicts the ratio of interdependence and its outcome value is 0.492, which indicates considerably good relationship between the dependent and the independent variables of the model. Hence model number 6 was accepted.

Table-5 Regression Analysis Model Summary

Model	R	Model Summary		
		R Square	Adjusted R Square	Std. Error of the Estimate
1	.585 ^a	.342	.341	.599
2	.656 ^b	.431	.429	.558
3	.685 ^c	.470	.467	.539
4	.693 ^d	.480	.476	.534
5	.698 ^e	.488	.483	.531
6	.702 ^f	.492	.486	.529

a. Predictors: (Constant), UO

b. Predictors: (Constant), UO, FC

c. Predictors: (Constant), UO, FC, RA

d. Predictors: (Constant), UO, FC, RA, PI

e. Predictors: (Constant), UO, FC, RA, PI, RK

f. Predictors: (Constant), UO, FC, RA, PI, RK, HO

The adjusted R Square is 0.486 (Table-5) which is when multiplied by 100 to convert it into percentage then comes to 48.8 which means that 48.6% of the variance in behaviour intention can be predicted by independent factors: UO, FC, RA, PI, RK and HO.

Table-6: Regression Analysis ANOVA

Model		ANOVA			F	Sig.
		Sum of Squares	Df	Mean Square		
6	Regression	140.084	6	23.347	83.327	0.000
	Residual	144.577	516	.280		
	Total	284.661	522			

Dependent Factor: BI

Predictors: (Constant), UO, FC, RA, PI, RK, HO

In Table-7, the empirical F-ratio, calculated by dividing the model mean square by the error mean square ($F=45.521$) found significant at 5 percent confidence level (Sig. of F is .000 i.e. <0.05). A statistically significant relationship between all the independent variables (UO, FC, RA, PI, RK and HO) and the dependent variable (BI) to adopt mobile internet services. To determine the relative impact of the independent variables on the dependent variable in the model the standardised regression equation analysed as follows:

$$BI = 0.117 + 0.360(UO) + 0.190(FC) + 0.195(RA) + 0.113(PI) + 0.090(PK) + 0.072(HO).$$

Table-7: Regression Analysis I Coefficients

Model		Coefficients				Sig.
		Unstandardized Coefficients		Standardized Coefficients		
		β	Std. Error	Beta	t	
6	(Constant)	.117	.205		.572	.568
	UO	.360	.045	.313	8.083	.000
	FC	.190	.042	.194	4.527	.000
	RA	.195	.035	.204	5.582	.000
	PI	.113	.034	.117	3.291	.001
	RK	.090	.034	.090	2.612	.009
	HO	.072	.033	.074	2.162	.031

The regression analysis was also performed with behavioural intention (BI) as the dependent variable and Overall Attitudinal (ATT), Overall Normative (NOR) and Overall Control (CON) constructs as the independent variable. Results exhibits ANOVA significance values of all the three factors was 0.00 less than 0.05 at 95 per cent confidence level which indicate that the regression model is significant. The regression equation for the validated model was found to be as follows: $BI = -0.328 + 0.746(ATT) + 0.169(NOR) + 0.244(CON)$. Amongst the three types of construct, overall attitudinal construct contributed to the largest variance ($P=0.746$) when explaining behavioural intention of mobile internet consumers. The overall control constructs contributed to the second largest variance ($P=0.244$), whilst overall normative constructs (P

= 0.169) contributed the least amongst the three types of constructs.

Table-8: Regression Analysis II Coefficients

Model		Coefficients		t	Sig.
		Unstandardized Coefficients β	Std. Error		
3	(Constant)	-.328	.245	-1.341	.181
	ATT	.746	.058	.512	12.845 .000
	NOR	.169	.043	.145	3.893 .000
	CON	.244	.069	.138	3.558 .000

9. DEMOGRAPHIC ANALYSIS

Independent-T test was applied to check the significance difference between the means of male and female for behavioural intention to adopt mobile internet services. The Levine's test results (Table-9) revealed insignificant outcomes ($P=0.500>0.05$), which signifies that there is no significant difference between behavioural intention to adopt mobile internet services among male and female users. The mean values of male and female are 4.28 and 4.24 respectively. This depicts that male and female are equally agreeing to adopt the mobile internet services with same gravity.

Table-9: Independent T test (Gender)

Testing Factor	Gender Categories	N	Mean	Levene Statistic Sig.	T Statistic Sig.
BI	Male	254	4.28	0.500	0.540
	Female	269	4.24		

One-Way ANOVA test was applied to check the significance difference between the means of various age groups for behavioural intention to adopt mobile internet services. The Levine's test result (Table-10) revealed insignificant outcomes ($P=0.859>0.05$), which signifies that there is no significant difference between age group of people and their behavioural intention to adopt mobile internet services. The respondents irrespective of their age are willing to adopt mobile internet services and the mean values across the age categories are varying between 4.33 and 4.20.

Table-10: One-way ANOVA test (Age)

Testing Factor	Age Categories	N	Mean	Levene Statistic Sig.	ANOVA Sig.
BI	Upto - 20 Years	27	4.28	0.859	0.781
	21 - 30 Years	220	4.22		
	31 - 40 Years	143	4.24		
	41 - 50 Years	108	4.33		
	51 Years and above	25	4.32		
	Total	523	4.26		

One-Way ANOVA test was applied to check the difference between the means of age groups for behavioural intention to adopt mobile internet services. The Levine's test result (Table-11) revealed insignificant outcomes ($P=0.799>0.05$), which signifies that there are no significant differences between education level of people and their behaviour behavioural intention to adopt mobile internet services. The respondents irrespective of their education level are willing to adopt mobile internet services and the mean values across the age categories are varying between 4.31 and 4.22.

Table-11: One-way ANOVA test (Education)

Testing Factor	Education Categories	N	Mean	Levene Statistic Sig.	ANOVA Sig.
BI	Under Graduate	164	4.31	0.779	0.480
	Graduate	282	4.22		
	Post Graduate and above	77	4.27		
	Total	523	4.26		

One-Way ANOVA test was applied to check the difference between the means of age groups for behavioural intention to adopt mobile internet services. The Levine's test result (Table-12) revealed insignificant outcomes ($P=0.442>0.05$), which signifies that there are no significant differences among people having different occupation types and their behaviour behavioural intention to adopt mobile internet services. The respondents irrespective of their occupation types are willing to adopt mobile internet services and the mean values across the age categories are varying between 4.32 and 4.15.

Table-12 One-way ANOVA test (Occupation)

Testing Factor	Occupation Categories	N	Mean	Levene Statistic Sig.	ANOVA Sig.
BI	Student	94	4.15	0.442	0.351
	Unemployed	152	4.23		
	Employed	266	4.31		
	Retired	11	4.32		
	Total	523	4.26		

Independent-T test was also applied to check the difference between the means of consumer's experience level and behavioural intention to adopt mobile internet services. The Levine's test result (Table-13) revealed insignificant outcomes ($P=0.601>0.05$), which signifies that there is no significant difference between behavioural intention to adopt mobile internet services among

respondents with less than 1 year or more than 1 year of exposure to mobile internet services. The mean values of respondents with less than 1 year or more than 1 year of exposure are 4.34 and 4.23 respectively.

Table-13: Independent T test (Experience)

Testing Factor	Experience Categories	N	Mean	Levene Statistic	T Statistic Sig.
BI	Less than 1 year	119	4.34	0.601	
	More than 1 year	404	4.23		

10. CONCLUSIONS

The study empirically addressed the main issue “Factors affecting the adoption of mobile internet services”. While addressing this issue it was revealed that 12 factors named as: Utilitarian Outcomes, Perceived Ease of Use, Facilitating Conditions, Service quality, Self-Efficacy, Declining Cost, Requisite Knowledge, Secondary Influence, Social Outcomes, Primary Influence, Relative Advantage and Hedonic Outcomes are the major factors which affects the adoption of mobile internet services in the area of study. The cumulative percentage of variance explained by these 12 factors was obtained as 80.63 percent. When these factors were regressed with

Behaviour Intention (dependent variable), 48.6% of the variance in behaviour intention was found to be predicted by independent factors; UO, FC, RA, PI, RK and HO. In addition to the regression test, other statistical test (Levine’s test) shows that there is no significance difference while adopting the mobile internet services on the basis of gender, age, education and even the time period for which the users are using the mobile internet services.

The findings of this study are important not only for internet service providers, but also to users across the community. For mobile internet service providers, this research would explore the possibilities of providing information to improve the services for consumer’s selection, satisfaction and loyalty. From consumers’ prospective, the findings will increase the competition among the mobile internet service providers and that may lead to more choice for the users in selecting the internet services and increased satisfaction to the users. In addition, the expansion of mobile internet services will be beneficial for the community as a whole since high-speed internet can promote both economic and social development of an area and nation as a whole (Choi and Yi, 2009; Czernich et al., 2011; Bojnec and Ferto, 2012; Pradhan et al., 2014).

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An Assessment of Consumer Behavior towards Green Hotels Using Perceived Value Model

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ABSTRACT

Individual behavior is a product of varying factors in the environment. Significant number of consumers worldwide is increasingly becoming concerned about the growing environment problems. Hence hotels are adopting practices which are ecofriendly and reduce their resource consumption. The present study utilizes the perceived value based on the variables of price, quality and accessibility to analyze the perceived value and its effect on consumer perception. The study was carried out with university students in Jaipur city. 167 usable responses were used for the study purpose. Correlation analysis among the various variables suggest that there was a high correlation between quality and perceived value (.790) and perceived usefulness and quality (.609). There was moderate correlation between consumer perception and price (.493) and between perceived value and price (.435) and perceived value and accessibility (.491). Both price and quality were major determinants of consumer perception which in turn was effectively translated into perceived usefulness and visit intention of the consumers. Hence hoteliers could effectively design their marketing practices so that consumers of green hotels could strategize their pricing and quality offerings.

Keywords: Consumer behavior, Green Hotels, Perceived Value, Visit Intention

INTRODUCTION

An individual's behavior is crafted by various factors in his surrounding environment. The behavior of an individual is thus an output of his awareness level towards changes in the environment. Meanwhile some hotels and restaurants are increasingly motivated and willing to take steps towards greater environmental responsibility because significant number of customers express their support (Bohdanowicz, 2003). The conceptualized model of perceived value based on actual price though was extended taking care of a multi-cue scenario involving price, brand name, store name, country of origin and packaging (Sharma and Garg, 2016). Previous research has shown that consumers vary in their reliance on both intrinsic and extrinsic cues as well as in their ability to accurately assess product cues accurately (Alba, 2000; Kardes, Kim, & Lim, 2001). The current research thus proposes to analyze customers perceptions of marketing cue of price with the perceptions of quality, accessibility, services, value in the Indian context.

REVIEW OF LITERATURE

The Theory of Planned Behavior (TPB) developed

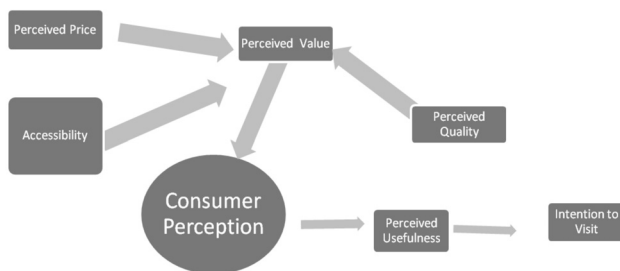
by Izek Ajzen state that an individual's behavioral intention are formed by attitude towards behavior, subjective norms and perceived behavioral control. (Ajzen and Driver, 1992). Dodds and Grewal (1991) studied the perceived quality by consumers and suggested the likelihood of a product being dependable and reliable. Dowling (1999) and Teas and Agarwal (2000) studied the perceived financial risk of a potential investment. Lee and Lou (2011) suggested that consumers with developed knowledge structures would depend differently in their usage of price as a cue. The extent of extrinsic cues would also depend on the consumer's familiarity and knowledge about the product class (Rao and Monroe, 1988). Several studies have investigated the effectiveness of price and brand image across several countries of origin to evaluate the consumers' perceptions of brand and products' quality (Qasem, 2011; Praveen, 2006). The study reexamines the conceptual model of Dodds, Monroe, and Grewal (1991) with emphasis on testing the relationship between the price cue, quality cue and accessibility and perceived value and customer perception and intention to visit. In recent years, there has been a concerted effort to extend research beyond the price/perceived quality relationship in order to gain a

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clearer understanding of the relationship between market cues and product choice. (Dodds & Monroe 1985; Monroe & Krishnan 1985; Zeithaml 1988; Dodds, Monroe & Grewal 1991; Dodds 1995, 1996).The present study utilizes the influence of extrinsic marketing cues of price quality and accessibility on the consumer perceived value.

RESEARCH MODEL AND HYPOTHESIS



H1: Perceived price significantly influences perceived value.

H2: Perceived Quality significantly influences perceived value.

H3: Accessibility significantly influences perceived value.

H4: Perceived Value significantly influence consumer perception.

H5: Consumer perception significantly influences perceived usefulness.

H6: Perceived Usefulness significantly influences intention to visit.

The research model thus incorporates the factors of accessibility, services value, price and quality as determinants of perceived value which influences consumer perception. This in turn influences the perceived usefulness and intention to visit a green hotel.

RESEARCH METHODOLOGY

The study consisted of administering structured questionnaires to students in higher education

institutes in Jaipur city. The age group identified was prominently from 18-23 years. Respondents included 43% females and 57% male students. The study particularly targeted this group as they were believed to be the future consumers of these services of green hotels.

Using convenience sampling a total of 200 questionnaires was circulated to university students and 167 usable responses were received. Regression analysis was used to assess the relationship between visit intention and independent variables of consumer behavior and perceived usefulness.52% of the sample was male and the rest 58% were female students. The students in age group 18-20 were 24%, 20-22 were 39% and 22-24 were 37%(Table:1).

Table 1: Descriptive Statistics

	N	Mini- mum	Maxi. mum	Mean	Std. Deviation
Price	167	3.00	5.00	4.4910	.51330
Accessibility	167	2.00	4.00	2.6527	.93736
Quality	167	4.00	5.00	4.4491	.49890
PValue	167	2.00	5.00	4.4611	.55698
Consumer_					
Perception	167	2.00	4.00	3.1138	.99043
PUsefulness	167	4.00	5.00	4.7725	.42051
Visit_Intention	167	3.00	5.00	4.3952	.50250
Valid N (listwise)	167				

DATA ANALYSIS AND INTERPRETATION

The mean values of the responses varied from 2.65 to 4.77.The standard deviation for all the variables was less than one the highest being .990 and lowest .420.Correlational analysis(Table:2) among the various variables suggest that there was a high correlation between quality and perceived value (.790) and perceived usefulness and quality (.609).There was moderate correlation between consumer perception and price (.493) and between perceived value and price(.435) and perceived value and accessibility(.491).



Table 2: Correlations

		Price	Accessibility	Quality	PValue	Consumer_ Perception	PU sefulness	Visit_ Intention
Price	Pearson Correlation	1						
	Sig. (2-tailed)							
	N	167						
Accessibility	Pearson Correlation	.695**	1					
	Sig. (2-tailed)	.000						
	N	167	167					
Quality	Pearson Correlation	.122	.091	1				
	Sig. (2-tailed)	.117	.243					
	N	167	167	167				
PValue	Pearson Correlation	.109	.078	.790**	1			
	Sig. (2-tailed)	.159	.318	.000				
	N	167	167	167	167			
Consumer_ Perception	Pearson Correlation	.435**	.491**	.591**	.429**	1		
	Sig. (2-tailed)	.000	.000	.000	.000			
	N	167	167	167	167	167		
PUsefulness	Pearson Correlation	.493**	.364**	-.257**	-.270**	-.039	1	
	Sig. (2-tailed)	.000	.000	.001	.000	.619		
	N	167	167	167	167	167	167	
Visit_ Intention	Pearson Correlation	-.243**	-.346**	.609**	.550**	.345**	-.627**	1
	Sig. (2-tailed)	.002	.000	.000	.000	.000	.000	
	N	167	167	167	167	167	167	167

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

Table 3: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.760 ^a	.577	.569	.32985

a. Predictors: (Constant), PUsefulness, Consumer_Perception, PValue

Table 4: ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	24.181	3	8.060	74.082	.000 ^b
	Residual	17.735	163	.109		
	Total	41.916	166			

a. Dependent Variable: Visit_Intention

b. Predictors: (Constant), PUsefulness, Consumer_Perception, PValue

The model summary (Table 3 and 4) indicates that R value is .760 and R square was .577. The Analysis of variance suggest that the significance value was .000 which suggest that visit intention had a significant impact of the independent variables perceived value, perceived usefulness and consumer perception (Table:5).

Table 5: Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients		
	β	Std. Error	Beta	t	Sig.
1 (Constant)	5.811	.416		13.961	.000
PValue	.296	.053	.329	5.594	.000
Consumer_ Perception	.093	.029	.183	3.242	.001
PUsefulness	-.635	.063	-.531	-9.998	.000

a. Dependent Variable: Visit_Intention

Similar results were obtained by Akdeiz et.al.(2013) who developed models to investigate customer's perception of value on the basis of extrinsic cues of quality.

- H1** Perceived price significantly influences perceived value. **Accepted**
- H2** Perceived Quality significantly influences perceived value.. **Accepted**
- H3** Accessibility significantly influences perceived value. **Not Accepted**
- H4** Perceived Value significantly influence consumer perception. **Accepted**
- H5** Consumer perception significantly influences perceived usefulness. **Accepted**
- H6** Perceived Usefulness significantly influences intention to visit **Accepted**

CONCLUSION

The study indicates the relative importance of various marketing cues as perceived usefulness, perceived value on the visit intention of customers. The role of all these variables is an important precursor for the formulation of visit intention to green hotels. Both price and quality were major

determinants of consumer perception which in turn was effectively translated into perceived usefulness and visit intention of the consumers. Hence hoteliers could effectively design their marketing practices so that consumers of green hotels could strategize their pricing and quality offerings.

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Content Analysis of Tourism Websites: A Comparative Study of Public and Private Tourism Websites

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ABSTRACT

The boom in Information and Communication Technology (ICT) in India is a well-known phenomenon with a positive impact on Indian economy. Development in ICT has changed business practices of travel and tourism industry in India. Customers depend upon ICT while identifying tourism destination and booking their trip. Tourism websites are becoming more popular as customers can browse these websites at the convenience of their workplace or homes. They can also compare the offers of different tourism websites with the click of a mouse. In online tourism, customers have to rely entirely on the information and content provided by tourism websites. Accordingly, an attempt has been made in the current study to compare the content provided by Private and Public tourism websites. Data has been collected from the 28 state tourism websites and top 28 private tourism websites (No. of hits). A list of variables was framed on the basis of review of literature. Further these variables were categorized into four categories namely Informational, Communicational, Transactional and Website Management. Content Analysis has been conducted to collect the data. Hotelling t square has been applied to analyze the collected data. It was concluded that there is significant difference between content displayed by public and private tourism websites for all categories except for transactional level.

Keywords: Content, Tourism, Websites, Private, Public

1. INTRODUCTION

The boom in Information and Communication Technology (ICT) in India is a well-known phenomenon with a positive impact on Indian Economy. Development in ICT has undoubtedly changed business practices and strategies as well as the structure of the each and every industry in India including travel and tourism sector (Porter, 2001). In the last decade, ICT has affected the way, the business activities were performed and the business organizations compete with each other (Buhali and Licata, 2002). Similarly, technological progress and the tourism industry have been going hand in hand for years (Poon, 1993). So, the role of ICT in tourism industry cannot be underestimated and it is a crucial driving force in the current information driven society. The internet has transformed the world into a global village that can be navigated at the click of a mouse. It provides potential customers with immediate access to textual and visual information throughout the world (Shanker, 2008). Customers depend upon ICT while identifying tourism sites. Thus, the internet has become a platform for travel and tourism industry to bring their products and

services to the customers around the world in an easy way (Poon, 1993). Since the use of internet is growing continuously, many tourism firms have been motivated to offer their services online and they offer better services in comparison to traditional modes of tourism. Being online is so important that if a tourist firm does not provide services on the web it may be ignored by the millions of people who now have access to the internet (WTO, 2000). Thus, a large number of successful online players in the various areas of tourism sector have gone competitive such as transportation, accommodation and package dealers (Gratzer and Winiwarer, 2004). With the help of ICT, tourism companies have developed tourism websites because it is a communication medium to exchange information between customers and firms. Gradually, tourism websites are becoming more popular as customers can browse these websites at the convenience of their workplace or homes. They can also compare offers of different tourism websites with the click of a mouse. Reservations can be made easily with the help of ICT for a variety of services such as transportation, lodging, meals, attractions,

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entertainment and guide services (Palmer and McCole, 2000). Customer convenience, time efficiency, possibility of purchasing anywhere, convenience of purchasing any time and direct access to information are the factors which motivate customers when they purchase online.

1.1 Designing of Tourism Websites: Designing of a tourism website is the presentation of the content which should be able to attract and inform the customers about e-services (Shoemaker et al., 2007). Jeong et al., (2003) claimed that developing and maintaining an effective web site would be critical to the success of the business. In short, companies are trying hard to make their websites as informative and appealing as possible (Liang and Law, 2003). Nowadays, travellers make a lot of comparisons before planning their trip. Thus, one of the most important attributes of a website is the richness of content which affects customer's decision making process. Therefore, it is crucial to design such a travel website which possesses good usability and more features to make the website efficient and enjoyable to use (Lu and Yeung, 1998). Due to the rapid technological advancements, tourism websites developers must regularly evaluate their websites in order to ensure that the website is efficient, appropriate and useful for the customers (Baloglu and Pekcan, 2006). Tourism website should be effective for the convenience of the customers. But, maintaining an effective website is very complicated. It has become vital for tourism companies to strengthen its customer relationships and gain a larger market segment by maintaining an effective website (Law et al., 2010).

Effective tourism websites should be dynamic, easy to use, subject to constantly update and full of rich content (Lazarinis et al., 2008). For instance, tourism website's 'ease of use' can be improved by better organizing the website information and providing simple and clear directions for use (Jeong et al., 2003). Moreover, a good tourism website should have some important components such as timely, accurate & good quality information, effective communication and good customer facility to establish lasting relationship. Other than information quality and ease of use, website reliability and security are other technical attributes that need to be looked into when developing a tourism website. A tourism website should be customer-oriented and

designed in such a way that allows customers to search minutely. The additional interactive features that can be added to the website are maps, driving directions, virtual tours, even online games and online simultaneous currency converter (Chu, 2001). Furthermore, customers' viewpoint is crucial to be included in the website development process as they are the ones who use and determine the eventual success of a website (Chung and Law, 2003). An effective website is not merely a website that can perform its function perfectly, but it should also meet customers' expectations (Essawy, 2006). Thus, in building a tourism website, tourism service providers need to focus on those elements which are being expected by their potential customers. A study conducted by Bai et al., (2008) revealed that there is a direct and positive relationship between website quality and customer satisfaction. A high-quality website is able to satisfy the customers by providing information that they are looking for.

1.2 Selection of Variables: It is stated from review of literature that the attractiveness and friendliness of the website should be maintained while designing a webpage. Although most of the viewers are interested in text and images so it should be kept in mind by the website developers while deciding the content of tourism websites. Photographs and interactive videos make tourism website more attractive, interesting and realistic for the visitors (Bender, 1997). Apart from it, proper care should be taken while drafting the language of tourism website. Search facility for acquiring information should be available on the tourism websites using search engines like Google by typing the key words. Efforts should be taken by the website developers to link the website to as many key words as possible to provide convenient searching process to the visitors. Clearly, when customers have to visit a tourism website, they prefer to visit a website which is properly managed. A set of criteria should be provided to the customers to satisfy them which include the factors like information, rich content, ease of use, security, answer to query, graphic design, up to date information etc. Besides it, visitors are always interested in seasonal offers and special events. The variables chosen for the study have been categorized into four categories on the basis of review of literature. Figure 1 presents the e-services offered by tourism websites under various categories.

Fig.1: List of Variables

Informational Level	Communicational Level	Transactional Level	Website Management
<ul style="list-style-type: none"> • Information about attraction • Tourist season • Information about hotels • Restaurants • Shopping • Industry News • Ways of transportation • Education Material • Publication/Reports • Travel related statistic • Visa information • Distance • Places to visit • Tourist information center • Regional content • Time Zone • Climate Zone • Themed products • Currency Information • Culture • Festival • What's new • Do not miss • Safety Information • Health Information • Emergency number • Event calendar • Map/Driving Directors • Travel guides/ Brochures • Tour operators • Trip Vacation planner • Travel tips • Packages • Sitemap • Customized products • Catalogue • Special announcements • Price Comparison 	<ul style="list-style-type: none"> • Search Engine • Email • FAQ • Multi language • Guest book • Toll free number • Feedback • Contact addresses • Online enquiry form • Chatting • Complaint Redressal settle • Email • Telephone directory • Visitor Comment 	<ul style="list-style-type: none"> • Online reservation • Money transfer facility • Advance booking of accommodation • Online payment • Currency converter • Event tickets booking • Rent a car • Cancellation a trip 	<ul style="list-style-type: none"> • Multimedia • Links to other sites • Video/virtual tour • Sign in • Ease of reading • Audio • Downloads • Last update • Available on social sites • Uncluttered screen • E-shopping • Net banking • Images

Source: Compiled from Review of Literature

1.2.1 Information Level: Information has been considered as one of the important tool for the success of tourism website. The availability of information is crucial for travelers for taking trip related decisions, as it is difficult to pre-test the tourist product, services or to get the money back when customers' expectations are not fulfilled (O'Connor, 2000).

Table 1: Description of Informational Level

Particulars	Contents	Description
Informational Level	Information about attraction	Information about place of interest
	Tourist season	Best season for tourists
	Information about hotels	Information about lodging, meals and other guest services
	Restaurants	Information about dining
	Shopping	Information about purchasing of items in tourist destination
	Industry News	News related to business and its association
	Ways of transportation	Different methods and guidelines for transportation
	Education material	It refers to educational information provided on tourism websites
	Publication/Reports	The act of assembling information related to different areas of tourism sector
	Travel related statistic	It is the collection, presentation, analysis and interpretation of tourism related data
	Visa information	Rules and regulation to enter, leave or stay for a specified period of time in a country
	Distance	Remoteness from one Remoteness of place to other place
	Places to visit	Places famous among tourists
Tourist information center	Government running information center for the convenience of tourists	

Regional content	Information about banks, culture, most important tourist attractions, weather, local transport, pictures, local currency etc.
Time Zone	Information about time of a particular zone on earth
Climate Zone	Information about whether/climate of a particular zone
Themed products	Ability to search for a product/service based on the pre-selected criteria
Currency Information	Facts about currency
Culture	Information about ethnicity, customs and tradition of a region
Festival	Information about event and festival
What's new	New things available on the tourism websites
Do not miss	The special things available on tourism destinations
Safety Information	Information of security and safety
Health Information	Information about fitness and medical facility
Emergency number	No. of emergency such as fire, accident recovery van
Event calendar	Events like Mahotsava, Mela etc. in that particular region
Map/Driving Directors	It is a visual representation of an area
Travel guides/ Brochures	Guide book is a book for tourists that provides details about a geographic location
Tour operators	A tour operator is a person or a company that offers holidays or vacations
Trip Vacation planner	A specialized person who plan a trip for his customers
Travel tips	Precautionary guidelines for the tourists
Packages	A bundle of facilities made up of transportation, accommodation, food etc.
Sitemap	Hierarchical diagram of different pages of the website
Customized products	To make or alter combination of products according to the choice of visitors
Catalogue	A list showing users the products and services offered by the tourism websites
Special announcements	Special discounted offer
Price Comparison	Clearly showing the prices of different tourism products and services

Source: Compiled from Review of Literature

In order to address tourists' needs, proper level of information should be maintained for them to initiate and generate purchasing interest (Bieger and Laesser, 2004). The quality and comprehensiveness of information provide the base for ultimate decision for trip (Douglas and Mills, 2004). Particulars of informational level have been shown in Table 1.

1.2.2 Communications Level: Communication feature of the websites helps visitors to get the required information. The communications facility refers to contact address, telephone numbers, e-mail, online consultation and traveler community where travelers can interact with each other. In addition, many visitors like to share their travel experience with others. Moreover, some visitors want to know what others tourists feel about the same destinations where they wish to visit. The facility of sharing the experience of the trip should be provided on the website (Lu and Deng, 2007). There should be another feature on tourism websites to link up the e-mails of the visitors to the website to get regular updates about upcoming events. Clearly, when customers visit a tourism website, they prefer to visit a website which settles the queries of customers. Particulars of communicational level have been shown in Table 2.

Table 2: Description of Communicational Level

Particulars	Contents	Description
Communicational Level	Search Engine	It enables visitors to search for keywords in order to quickly locate specific information on the website
	Email	Facility of interaction to satisfy queries of customers
	FAQ	Allowing access to frequently asked questions (FAQ) and allow visitors to submit requests
	Multi language	Availability of information in different languages
	Guest book	An alternative to email and all responses are posted on the site for all others to read
	Toll free number	Free number for the facility of tourists
	Feedback	Allowing sending critics or suggestions about the place as well as the website
	Contact addresses	Address for posting queries
	Online enquiry form	Online settlement of doubts
	Chatting	Online communication through website
	Complaint Redressal Settle	Information to settle doubt and grievances of tourists
	Email	Electronic communication by tourists
	Telephone directory	It is a address book and a list of telephone subscribers
	Visitor Comment	Positive or negative views by tourists

Source: Compiled from Review of Literature

1.2.3 Transaction Level: However, the transactional function proves to be a successful step towards a concrete relationship. Reservation information should be provided on the tourism websites. The reservation facility refers to the different types of transactions related to reservation such as flight, hotel and tour package. Transaction also includes the advance booking of accommodation, event tickets booking, rent a car and cancellation of trip. Description of transactional level has been shown in Table 3.

Table 3: Description of Transactional Level

Particulars	Contents	Description
Transactiona lLevel	Online reservation	It is a facility to reserve trip with the help of click of mouse
	Money transfer facility	Facility of transfer of money
	Advance booking of accommodation	Prior reservation of tickets
	Online payment	Facility of payment through internet
	Currency converter	The process of converting one form of currency into another country's usable currency
	Event tickets booking	Booking for upcoming events by online
	Rent a car	Facility to take a car on rent for a particular time
	Cancellation a trip	Information about cancelling of a trip

Source: Compiled from Review of Literature

1.2.4 Website Management: Website management is the basic function of website developers because it is the key driving factor for visitors to use the web sites. Good website management allows the tourism organization to engage customers' interest (Doolin et al., 2002). The content of tourism websites is particularly important, because it directly influences the perceived image of the destination and creates a virtual experience for the customers (Holsti, 1969). Description of website management level has been shown in Table 4.

Table 4: Description of Website Management

Particulars	Contents	Description
Transactional Level	Multimedia	Multimedia features
	Links to other sites	Direct links to other important websites
	Video/virtual tour	Description of video and photography based media
	Sign in	Facility of using account by tourists
	Ease of reading	Use of colors, different type of font that are easy for reading
	Audio	Electrical or other representation of sound
	Downloads	It is a facility to receive data to a local system from a remote system about any information
	Last update	Adoption by the website to the continuous marketing changes
	Available on social sites	It is a platform to build social networks or social relations among people
	Uncluttered screen	Clear presentation of content on the screen
	E-shopping	It is a process which allows customers to directly buy goods or services from a seller over the internet by using a web browser
	Net banking	A system allowing individuals to perform banking activities at home via the internet
	Images	Graphical presentation of natural scenery

Source: Compiled from Review of Literature

The websites must be technically sound and it should be customer centric. Page loading speed, business content, navigation efficiency, security and consumer focus should be kept in mind while designing a tourism website (Morrison et al., 2004). The content of a tourism website is of great importance since it directly influences the visitor’s perception towards destination (Zafiropoulos et al., 2005). People may use the same site frequently if graphics seem impressive (Hudson et al., 2000). Thus, website design is one of the important dimensions of service quality. The deficiency of website design can result in a negative impression and customers may exit the purchase process (Hongxiu et al., 2009).

However, in the past, Indian Tourism Development Corporation (ITDC) and other State Tourism Corporations were using traditional approaches for booking tourism related services. But, with advancement in the information technology, traditional marketing approach was slowly replaced by internet based tools. Various tourism agencies have developed their websites in order to attract more and more national and international tourists.

2.1 Review of Literature: Following studies have been reviewed in order to find out the gap of study.

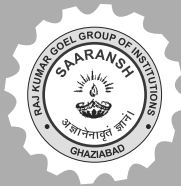
Table 5: Studies discussing the Review on Content Analysis of Major Service Providers in Tourism and other Sectors

Author	Country	Research Objectives	Variables	Methodology
Murphy et al., 1996	USA (16 hotels websites)	To study the marketing of hotel companies through internet	Home page, search engine, website basic functions and website communication function	Content analysis
Benckendorf and Black, 2000	Australia (16 regional tourism authorities)	To investigate the use of the internet as a tool for marketing for travel-related services	Interactivity, integrity, functionality, navigation, readability, value-added services, maintenance and promotion	Content analysis
Wan, 2001	Taiwan (60 international tourist hotels and 78 tour wholesaler)	To evaluate the web sites of international tourist hotels and tour wholesalers	User interface, variety of information and online reservation	Content analysis
Lu et al., 2002	China (9 travel websites)	To analyze the business strategies used by travel business websites	Information content, ease of use, functionality, transactional processing, security, online payment and information storage	Content analysis
Nysveen, 2003	Norway (1000 tourists)	To examine the different types of value-added services offered by tourism web sites	Search engine, service aggregation, customer community, service integration, personalization trust and pricing methods	One way ANOVA
Costas, 2004	Greece (10 hotel groups and top 20 hotel websites)	To measure the richness of specific and comprehensive information dimensions	Facilities information, customer contact information, reservation and prices information, surrounding area information, management of the web site, company information and communication	Content analysis
Zhou and Desantis, 2005	North America, Europe, Asia, Australia and Africa (55 tourism websites)	To address usability issues in city tourism web site design	Content functions, design and interactivity	Content analysis
Beldona and Cai, 2006	United states (50 tourism websites)	To measure the websites' effectiveness in the three areas i.e. content, interactivity and promotional value	Accommodation, attractions, performing arts, transportation, shopping, recreation, maps, press releases, events calendar, meeting facilities and tours information	Content analysis

Table 5 cont...

Author	Country	Research Objectives	Variables	Methodology
Derong, 2009	China (1000 travel agencies)	To extend the model of e-MICA to evaluate the website performance of travel agencies	Downloading speed, communication skill and awareness of ICT among people	Content analysis
Hellemans and Govers, 2009	Europe (11 tourism websites)	To investigate the pictorial and textual information offered by the European Travel Commission and National Tourists Offices websites	Image projections	Content analysis
Salavati and Hashim, 2011	Iran (57 hotels websites)	To examine website adoption and performance among Iranian hotels	Search engine, information content, website management and language support	Content analysis
Turner, 2011	Canada (20 medical websites)	To check the websites of Canadian medical tourism companies that advertised international healthcare	Destination countries, medical facilities, health services, air travel, hotel accommodations and holiday excursions	Content analysis
Panigrahi, 2012	India (20 tourism websites)	To make an assessment of Indian tourism websites	Attraction, weather information, important information, plan your trip and travel tips	Content analysis
Kim and yoon, 2013	Korea (30 tourism website)	To analyze the Korean tourism brand image in a popular tour guidebook i.e. Lonely Planet Korea	Information content, multi-language support and reputation of tourism	Content analysis
Barreda and Bilgihan, 2013	India (20 Tourism websites)	To determine how travelers communicate in the cyberspace in relation to their positive and negative experiences	Positive and negative factors	Content analysis
Lee, 2016	(91 tourism websites)	To explore the benefits and risks featured in medical tourism broker websites	Benefits of downloading	Content analysis

Source: Adapted from Various Studies



2.2 Need of the Study: Boom of Information and Communication Technology (ICT) in India is a well-known phenomenon with a positive impact on Indian Economy. Development in ICT has changed business practices of travel and tourism industry in India. Customers depend upon ICT while identifying tourism destination. Tourism websites are becoming more popular as customers can browse these websites at the convenience of their workplace or homes. They can also compare the offers of different tourism websites with the click of a mouse. In online tourism, customers have to rely entirely on the information and content provided by tourism websites. Moreover, worldwide many studies have been conducted so far to study the content available on the tourism websites but not many have been found to deal specifically with Indian tourism websites. Therefore, purpose of present study is to evaluate

and compare the content available on the state tourism websites of India with private tourism websites based on the facilities and e-services offered by these websites.

2.3 Objective of the Study: In today's competitive environment, tourists use to book their journey with the help of online mode of booking. For this, they rely on the information and content provided by tourism websites. So an attempt in the current study has been made to compare the content available on public and private tourism websites.

3.1 Database and Research Methodology: For the current study, data has been collected from secondary sources. Relevant articles have been thoroughly studied in order to find out the suitable variables. 28 state tourism websites and top 28 private tourism websites have been reviewed in order to compare the content provided on these websites upto April 2014. Tellangana state was

Table 5: List of Tourism Websites

Names of State Tourism Websites of India	Web Address of State Tourism Websites of India	Names of Private Tourism Websites	Web address of Private Tourism Websites
Andhra Pradesh	www.aptdc.in	Make my trip	www.makemytrip.com/
Arunachal Pradesh	www.arunachaltourism.com/	Yatra	www.yatra.com/
Assam	www.assamtourism.org/	Cleartrip	www.cleartrip.com/
Bihar	www.bstdc.bih.nic.in	Fodors' travel	www.fodors.org/
Chhattisgarh	www.chhattisgarhtourism.net/	Travelguru	www.travelguru.com/
Goa	www.goatourism.gov.in/	Ezeego	www.ezeego1.co.in/
Gujarat	www.gujarattourism.com/	Ixigo	www.ixigo.com/
Haryana	www.haryanatourism.gov.in/	Travelmasti	www.travelmasti.com/
Himachal Pradesh	www/hptdc.nic.in	Mybudget trip	www.makemybudgettrip.com/
J&K	www.jktourism.org	Trip advisor	www.tripadvisor.in/
Jharkhand	www.jharkhandtourism.in	Lonely planet	www.lonelyplanet.com/india
Karnataka	www.karnatakaturism.org	Expedia.com	www.expedia.co.in/
Kerala	www.keralaturism.com	Travelcity	www.travelcity.co.in
Madhya Pradesh	www.mptourism.com	Orbitz	www.orbitz.com/
Maharashtra	www.maharashtratourism.gov.in	Thomas cook	www.thoascook.com
Manipur	www.manipur.nic.in	Booking.com	www.booking.com/
Meghalaya	www.megtourism.gov.in	Planet ware	www.planetware.com/
Mizoram	www.mizotourism.nic.in	Hotels.com	www.hotels.com/
Nagaland	www.tourismnagaland.com	Viaworld	www.viaworld.com
Orissa	www.orissaturism.gov.in	Kayak	www.kayak.com
Punjab	www.punjabtourism.gov.in	Hotwire	www.hotwire.com/
Rajasthan	www.rajasthantourism.gov.in	Travel adda	www.traveladda.com
Sikkim	www.sikkimtourism.travel	Travel chacha	www.travelchcha.com
Tamil Nadu	www.ttdonline.com	Goibibo	www.goibibo.com
Tripura	www.tripuratourism.in	Travelzoo	www.travelzoo.com/
Uttar Pradesh	www.up-tourism.com	Travel india	www.travelindia.com/
Uttarakhand	www.uttarakhandtourism.net	Travel maps	www.travelmaps.com/
West Bengal	www.westbengaltourism.gov.in	Must see	www.mustsee.com/

Source: Ministry of Tourism, India; www.wikipedia.com

not taken in the study as tourism website for this state was formed after that time period. All 28 state tourism websites and top 28 private tourism websites have been taken as sample in the current study. The top 28 private tourism websites are representative websites from domestic tourists' searching perspective and have been selected as per the number of hit done by tourists. Score has been calculated on the basis of presence or absence of variables. If a variable is present then 1 was given and if variable is absent then 0 was assigned. Then on the basis of presence of 1 and 0, total score was calculated. Furthermore total score was converted into percentage with the help of percentage formula for each and every category. Percentage scores for each category of public and private tourism websites have been shown in annexure. Table 5 presents the names and web addresses of state tourism websites and private tourism websites, which were taken in the current study.

3.2 Hypotheses for Content Analysis

For determining the differences between content available on public and private tourism websites, the following hypotheses were framed:

H₀₁: There is no significant difference between informational content available on public and private tourism websites.

H₀₂: There is no significant difference between communicational content available on public and private tourism websites.

H₀₃: There is no significant difference between transactional content available on public and private tourism websites.

H₀₄: There is no significant difference between website management of public and private tourism websites.

In order to know the significant difference between content available on public and private tourism website, Hotelling t square test was used on the sample data. The analysis of various variables used in the study with respect to public and private tourism websites along with interpretation has been detailed below:

4. Analysis and Interpretation of Result

Table 6 presents the results of Box test of equality. It is a test of equality which tests whether the data violates the assumption of homogeneity of variance for various categories of variables taken in the current study. Null hypothesis for this test

'covariance matrices of the dependent variables is equal across groups' is accepted at 5% level of significance meaning hereby that they are not significantly different. Further, it means correlation among various categories is equal across the groups. Thus, the assumption of equality of variance for hotelling t square test has been met.

Table 6: Box's Test of Equality of Covariance Matrices

Box's M	17.073
F	1.570
df1	10
df2	13941.036
Sig.	.109

Tests the null hypothesis that the observed covariance matrices of the dependent variables are equal across groups.

Source: Calculated through SPSS

Furthermore, Levene's Test for Equality of error variances tests whether there is homogeneity between groups variances i.e. the variances of all categories are equal. The result of Levene's Test for Equality of error variances has been displayed in Table 7. The p value is greater than 0.05 for all the categories of variables. H₀ is accepted which shows that the error variances are equal among all category.

Table 7: Levene's Test of Equality of Error Variances

	F	df1	df2	Sig.
Informational Content	1.835	1	54	.181
Communicational Content	.088	1	54	.768
Transactional Content	1.199	1	54	.278
Website Management	1.021	1	54	.317

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

Source: Calculated through SPSS

However, multivariate test (Table 8) shows the main results of hotelling t square test. This test indicates whether there are statistically significant differences among the groups on a linear combination for all four categories of variables. There are a number of tests Wilks' Lambda, Hotelling Trace Test, Pillai's Trace Test and Roy's Largest Root Test. But the most commonly used method is Wilks' Lambda (Tebachnick and Fidell, 1996). In the current study, the value of Wilks' Lambda is 0.595 with a significance level of 0.000, showing that there is significant difference between content displayed by public and private tourism websites for their overall information.



The difference could be for one category or for all four categories. But the multivariate test does not show which category differ for public and private tourism websites. It could be confirmed through the test of 'between subject effect'.

The results of test of between subjects effects shows that the significance value for transactional level (H_{0iii}) is less than 0.05, thus null hypothesis is rejected at 5% level of significance. Therefore,

there is significant difference between the public and private tourism websites for transactional category (Table 9). Whereas, null hypotheses H_{0i} , H_{0ii} and H_{0iv} have been accepted for other three categories of variables. Thus, there is a no significant difference between content available on public and private tourism websites for informational content, communicational content and website management.

Table 8: Multivariate Tests

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Intercept	Pillai's Trace	.973	452.362	4.000	51.000	.000	.973
	Wilks' Lambda	.027	452.362	4.000	51.000	.000	.973
	Hotelling's Trace	35.479	452.362	4.000	51.000	.000	.973
	Roy's Largest Root	35.479	452.362	4.000	51.000	.000	.973
category	Pillai's Trace	.405	8.668	4.000	51.000	.000	.405
	Wilks' Lambda	.595	8.668	4.000	51.000	.000	.405
	Hotelling's Trace	.680	8.668	4.000	51.000	.000	.405
	Roy's Largest Root	.680	8.668	4.000	51.000	.000	.405

Source: Calculated through SPSS

Table 9: Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	Informational Content	.495	1	.495	.004	.947	.000
	Communicational Content	32.799 ^c	1	32.799	.164	.687	.003
	Transactional Content	11074.219	1	11074.219	33.249	.000	.381
	Website Management	127.853	1	127.853	.563	.456	.010
Intercept	Informational Content	177483.676	1	177483.676	1606.838	.000	.967
	Communicational Content	162248.542	1	162248.542	812.757	.000	.938
	Transactional Content	175784.040	1	175784.040	527.778	.000	.907
	Website Management	181979.079	1	181979.079	800.771	.000	.937
category	Informational Content	.495	1	.495	.004	.947	.000
	Communicational Content	32.799	1	32.799	.164	.687	.003
	Transactional Content	11074.219	1	11074.219	33.249	.000	.381
	Website Management	127.853	1	127.853	.563	.456	.010
Error	Informational Content	5964.583	54	110.455			
	Communicational Content	10779.883	54	199.627			
	Transactional Content	17985.491	54	333.065			
	Website Management	12271.767	54	227.255			
Total	Informational Content	183448.753	56				
	Communicational Content	173061.224	56				
	Transactional Content	204843.750	56				
	Website Management	194378.698	56				
Corrected Total	Informational Content	5965.077	55				
	Communicational Content	10812.682	55				
	Transactional Content	29059.710	55				
	Website Management	12399.620	55				

Source: Calculated through SPSS

5.1 Conclusion: Hence, information is the life-blood of the travel industry and the development of information communication technology has become crucial driving force for tourism business. Nowadays, most of the tourist agencies have created their websites to conduct electronic business transactions and to reach and approach wide customer base. Website developers should take action to enrich the website contents to promote a particular destination and to attract, inform and facilitate web users.

Thus, for the purpose of current study the informational content, communicational content, transactional content and website management have been compared. Interface language, hyperlinks to different state tourism websites, information about states, tourist season, places to visit, hospitality, online booking facility etc. have been studied and compared on the basis of their availability on tourism websites either private or public. As far as private and public tourism websites are concerned then, then there is significant difference for transactional category only.

5.2 Implications and Recommendations of the Study

- Current study can be helpful for tourism website designers to understand the importance of ICT to remain competitive. They can explore the potential opportunities emerging through IT, and be proactive in recognizing the capability of technology.

- The study will also prompt the managers of tourism websites to develop right strategies to retain customers by concentrating on various e-services.
- It was found from results that state tourism websites are almost equal to private tourism websites as far as informational, communicational and website management categories are concerned. So, study will help tourism service providers to improve the contents available on their websites to attract the potential tourists.
- Developers of private and public tourism websites should frame their websites in such a way that these websites must be easily navigated, efficient, secured and consumer oriented to give strong competition to each other. They should make efforts to magnetize the users of tourism websites to visit the same websites again.

5.3 Limitations and Future scope of the study

- Current study covers the tourism websites of Government and Private sector in India. Further study can be conducted by taking international tourism websites into consideration.
- Future research can be carried out to examine additional tourism website features that have not been taken in the current study.
- Current study considered only tourism websites. However, other related hospitality websites can be inspected in detail as well.

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Annexure

Percentage Scores of Content Available on Tourism Websites (Both for Public and Private Tourism Websites)

Public Tourism Websites	Score of Information Level	Score of Communicational Level	Score of Transactional Level	Score of Website Management Level	Private Websites	Tourism	Score of Information Level	Score of Communicational Level	Score of Transactional Level	Score of Website Management Level
Punjab	60.5263158	42.8571429	25	61.53846	Make my trip		70.198	68.4285714	100	84.61538
Himachal Pradesh	68.4210526	68.2857143	50	69.23077	Yatra.in		64.235	64.2857143	87.5	69.23077
J&K	68.4210526	42.8571429	50	69.23077	Cleartrip.com		42.105263	28.5714286	87.5	30.76923
Uttarakhand	55.2631579	68.2857143	25	69.23077	Fodors' travel		65.789474	64.2857143	25	84.61538
Uttar Pradesh	57.8947368	42.8571429	50	53.84615	Travelguru		52.631579	50	87.5	53.84615
Haryana	60.5263158	42.8571429	37.5	76.92308	Ezeego		57.894737	64.2857143	87.5	61.53846
Bihar	43.4736842	42.8571429	25	53.84615	Ixigo		47.368421	35.7142857	75	38.46154
Jharkhand	44.7368421	31.5714286	50	53.84615	Travelimasti		39.473684	68.4285714	75	53.84615
Orissa	56	42.8571429	50	61.53846	Mybudget trip		63.157895	57.1428571	87.5	69.23077
West bengal	56	68.2857143	62.5	30.76923	Trip advisor		58.236557	42.8571429	87.5	53.84615
Rajasthan	65.7894737	71.4285714	62.5	69.23077	Lonely planet		55.263158	57.1428571	62.5	69.23077
Goa	60.5263158	64.2857143	25	53.84615	Expedia.com		52.631579	50	62.5	61.53846
Gujarat	56	68.2857143	62.5	53.84615	Travelcity		57.894737	35.7142857	62.5	53.84615
Maharashtra	65.7894737	57.1428571	62.5	61.53846	Orbitz		63.157895	42.8571429	75	53.84615
Andhra Pradesh	63.1578947	35.7142857	50	53.84615	Thomas cook		71.052632	64.2857143	87.5	76.92308
Karnataka	65.7894737	64.2857143	50	92.30769	Booking.com		47.368421	64.2857143	62.5	53.84615
Kerala	65.7894737	57.1428571	62.5	69.23077	Planet ware		52.631579	21.4285714	25	23.07692
Tamil Nadu	49.3684211	57.1428571	50	53.84615	Hotels.com		47.368421	64.2857143	75	46.15385
Chhattisgarh	56	68.2857143	37.5	46.15385	Viewworld		52.631579	42.8571429	75	61.53846
Madhya Pradesh	49.2538444	42.8571429	50	53.84615	Kayak		26.315789	35.7142857	25	23.07692
Andhral Pradesh	49.2538444	35.7142857	25	53.84615	Hotwire		57.894737	57.1428571	75	53.84615
Assam	60.5263158	68.2857143	25	61.53846	Travel adda		68.421053	57.1428571	25	69.23077
Manipur	48.1052632	68.2857143	25	46.15385	Travel chachia		73.266547	68.4285714	87.5	69.23077
Meghalaya	47.3684211	35.7142857	37.5	53.84615	Groibibo		57.894737	68.4285714	75	61.53846
Mizoram	44.7368421	68.2857143	25	61.53846	Travelzoo		28.947368	21.4285714	62.5	23.07692
Nagaland	47.3684211	68.2857143	25	69.23077	Travelindia.com		63.157895	64.2857143	75	46.15385
Sikkim	68.4210526	68.2857143	25	61.53846	Maps		68.325	68.7142857	62.5	53.84615
Tripura	40.8421053	42.8571429	50	23.07692	Must see		68.325	42.8571429	87.5	53.84615
Means of Content explored	56.26	54.85	41.964	58.516			56.20	52.53	70.08	55

Source: Compiled from Content Available on Tourism Websites

Entrepreneurial Development in Make in India Era

Pratibha Giri

ABSTRACT

Entrepreneurship is growing significantly in India, and startups are beginning to radically impact the economy. Enabled by strong demographics and an open, commercial culture, new company registration has grown from 15,000 in the 1980s to almost 100,000 in the 2010s. India's entrepreneurs rank among the youngest in the world with an average age of 28. Formalization of India's startup economy is also increasing, with funding for startup companies more than doubling between 2014 and 2015. The Make in India initiative was launched by Prime Minister Narendra Modi with the prime goal of encouraging multinational and domestic companies to manufacture their products in India. The economy of the country has been benefitted from the country's accelerating start up activity. As of 2015, India's technology startup businesses created an estimated 80,000 jobs. The country is soon becoming the favoured manufacturing destination of most investors.

The present study attempts to analyse the recent initiatives taken by the Government with regards to Industrialization and Urbanization, ease of doing business and the Make in India campaign and its role in economic development and employment generation of the country. The study also throws light on the support extended by the government of the country **for Innovation and Entrepreneurship in India.**

Keywords: *Startups, Demographics, economy, initiative.*

INTRODUCTION

The Indian economy has been observing positive attitudes during the past few years. The country is soon becoming the favoured manufacturing destination of most investors' across the globe. India today has reached that stage wherein more than 60 percent of the population is in the economically active age group of 15-59 years, commonly referred to as the DEMOGRAPHIC DIVIDEND. In order to tap this dividend it is necessary for the economy of the country to generate ample job opportunities to engage this economically active population.

To boost the Indian economy and to harness this demand, the Indian government took Make in India initiative. The macroeconomic indicators have also displayed an encouraging trend in the recent times. However, the situation of the manufacturing sector in India is a cause of concern. At 16% value added to GDP, the sector does not seem representative of its potential which should have been 25%. The Make in India campaign of the Government will affect the young entrepreneurs in a very positive way. If this program delivers than it will bring an attitudinal change the opinion of the world towards India and at the same time encourage and empower entrepreneurs to make in India. The country is expected to have 500 million strong workforce by 2022 but it faces challenges in

gaining this demographic dividend because of the fact that the illiteracy levels among the labour force is still high and between 70-80 percent of the labour force have education levels below secondary. Nearly 48 percent of the workforce is involved in agriculture and the contribution of agriculture to GDP is not more than 16 percent. It is because of the low level of education and the inability of the people to access decent jobs in the non-farm sector. As far as status of employment is concerned, 52 percent of the workforce is self-employed as own-account workers, 30 percent employed as casual workers and around 18 percent have regular jobs. All this resulted in more than 90 percent of the workforce engaged in informal jobs thereby slowing down the structural transition from farm to the non-farm sector. The focus therefore has been to create decent jobs which can give the workforce a reasonably good standard of living. The focus is on wage employment. It has been felt essential to promote specific entrepreneurship because an entrepreneur would be in a position to create more jobs.

ENTREPRENEURSHIP IN INDIA

Start ups need a supporting eco-system to nurture them. Entrepreneurs have been setting up businesses in India since long. All these

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entrepreneurs have originated from a dominant caste. The basic of this eco-system is the incubation facility within the business which facilitated the next generation entrepreneur to dabble in incremental innovation, funded by angel funding drawn from the spare generated by the cash cow of the business. Prototypes were developed and test marketed through access to vendors and distributors and the sales force. Timely customer feedback on the prototype led to building the minimum viable product and the soft market launch. Business mentoring from the experienced elders substituted for any classroom learning.

The mind-set of the community was that business was a 'dhandha' (living), requiring hands-on exposure which was more useful than classroom based 'Higher Education', that 'jugaad' (improvisation), substituted for frugal innovation is backed up by the belief that no matter what business profits could be extracted by the sleight-of-hand expertise of the chartered accountant.

Those from non-business communities lacked the vital eco-system for creating a startup. Education in general and technical education in particular, drew them as a means for joining 'service' and pursuing a rising career which they considered superior to dhandha.

However, the emergence of technology as the key driver of a venture and the consequent necessity of professional education for new venture creation has forever botched up the age old divergence in mind set. Leading the tech charge has been Information Technology which required the founding team to have computer science graduates. Along with technology came the professional network or eco-system – with substantial support from US based NRIs. Truly, it was the impact of Indians in America that gave the lie to the deeply held belief in traditional India that entrepreneurs were born – in a certain community. Indians in USA, irrespective of their surnames, pursued knowledge based new venture creation with vigour and succeeded with support from the eco-system. Over the past few decades an equivalent eco-system has been getting in place in India for the new age ventures starting with the well intentioned mentor and gradually extending to growth stage investors who are the Venture Capitalists and Private Equity players, and not excluding the markets – from US based customers for the IT ventures right down to Tier 3

city based consumers for the e-commerce ventures!

NEN, the National Entrepreneurship Network, set up by the US based Wadhvani Foundation was the catalyst for encouraging college managements to set up E-Cells. These cells have been influential in triggering awareness, interest, desire and action towards entrepreneurship among students. NEN took roots in India through the pioneering role played by the founding members, IIM Ahmedabad, IIT Bombay, SPJIMR, BITS Pilani and IBAB Bengaluru. They have designed and delivered courses on New Venture Creation, organised Business Plan Competitions, instituted E-Cells and started Incubation Centers. The seed sown by NEN has blossomed into a nursery of E-Cells which are involved in promoting start-ups at the college level. IIM A has built a reputed Centre for Incubation and SPJIMR conducts public programmes on Start Your Business for aspiring entrepreneurs and Grow Your Business for early growth stage entrepreneurs.

In addition to E-Cells, numbers of higher education institutions are setting up incubation centres with private players chipping in by rolling out start up accelerators. However, the scantiness of experienced mentors and domain experts confines the effectiveness of these institutions. Entrepreneurship is the youngest academic discipline in India. So now India generates entrepreneurs from all communities, whether first generation entrepreneurs from non-business communities or next generation members from traditional family businesses.

The co-founders of the new ventures are 'merit' based, bringing in specific complementary skills. New generation entrepreneurs do not build ventures for life-long association. They are reconciled to winding up when the funding dries up and to exiting from their own venture for business and personal reasons. The value of new age undertakings is based on impalpable valuation which cannot be mortgaged.

Till recently, business operated on the 'cost plus margin' business model. Today's ventures have innovative business models with radically different pricing strategies for products or services being offered. Such business model aims to jack up volumes to a level that will ensure business viability at scale in the shortest time possible.

Traditional family business owners accord the

highest importance to retaining 100% equity ownership. The current entrepreneurial generation does not conform to this mind set. Authority is not linked with ownership. Since rapid growth is the mantra, effectiveness is the critical factor. Leadership is not related with age and past achievements in a slow paced environment but is related to pursuing a shifting goal post, effective decision making and team building. New ventures are made with stimulating teams working together to create a sustainable venture in the shortest time. Team members remain as long as they perceive the goal is being achieved. Leadership is by consent and through demonstration of competence in action.

As the country enters into a new year, media coverage of the entrepreneurial eco-system is not all rosy. Entrepreneurs have begun to face the reality of being abandoned by risk funds and of pursuing growth that enables the venture to capture value over valuation.

RECENT INITIATIVES BY THE GOVERNMENT FOR INNOVATION AND ENTREPRENEURSHIP

The Indian Government has commenced several initiatives and policy measures to nurture a culture of invention and entrepreneurship in the country. Job creation is a prime challenge facing the country. With a significant and unique demographic advantage, the country has an immense potential to modernise and create jobs for the benefit of the nation and the world. In the recent years, a wide range of new programmes and opportunities have been created by the Government to nurture innovation across a number of sectors.

ADVANTAGE INDIA

- India has a population base of 1.31 billion out of which 767 million falls in the age group of 15-64 age group, and also set to become the youngest country with average age of 29 years by 2025
- The country has 2nd largest Internet users' base with 462 million Internet users.
- The country has a demonstrable capability to reach near 100% literacy level by 2025.
- Because of the considerable Upward mobility

among all sections, more than 150 million will be added to middle class of India by 2025 which will create Huge consumer market base of US\$ 3.6 trillion by 2020 (BCG Report).

- India is the 3rd largest economy in the world with size of US\$ 8.6 trillion by purchasing power parity (PPP) and is expected to rise to US\$ 20 trillion in size by 2025.
- India is the fastest growing economy in the world with the rate of 7.6% in 2015-16.
- The country has an immediate investment opportunity of \$1 trillion (Economic Times).
- The country around the globe enjoys stable/ positive ratings from major credit rating agencies and has a total foreign exchange reserves of US\$ 371 billion as on 30th Sep 16.
- India has the 2nd largest Railway Network in the world, used by 23 million travellers every day.
- India has the 2nd largest Road Network in the world stretching 3.3 million km.
- The country has 12 major ports, 200 notified minor and intermediate ports.

NEW INFRASTRUCTURE

Urbanization and Industrialization

To foster a culture of innovation and entrepreneurship in the country the Government took an initiative for developing Industrial Corridors and 21 new nodal Industrial Cities.

- Vizag-Chennai Industrial Corridor (VCIC)
- Amritsar Kolkata Industrial Corridor (AKIC)
- Delhi-Mumbai Industrial Corridor (DMIC)
- Chennai-Bengaluru Industrial Corridor (CBIC)
- Bengaluru-Mumbai Economic Corridor (BMEC)

These 21 new nodal cities will be having advantages like; Large land parcels, Planned communities, ICT enabled infrastructure, Sustainable living, Excellent connectivity- Road, Rail etc.

A mega infra-structure project of USD 100 billion is the Delhi-Mumbai Industrial Corridor with financial and technical aids from Japan, covering an overall length of 1,483 km. Dedicated Freight



Corridor (DFC) of 1504 km as the backbone, DMIC will intersect 7 states namely Delhi, Uttar Pradesh, Haryana, Rajasthan, Madhya Pradesh, Gujarat and Maharashtra

1. Construction of 15,000 km new roads by 2017 is targeted under various projects in addition to Doubling of Network of Roads by 2020.
2. For Modernising and better connectivity of Indian Railway projects such as Setting up of New Railway Stations, Modernisation of Rolling stock, High Speed Railways, Port Mine connectivity etc. have been commenced.
3. Eastern Dedicated Freight Corridor of 1840 km length and Western Dedicated Freight Corridor of 1504 km length is under construction as well as many projects are under planning stage.
4. To modernize India's Ports and Inland waterways, Sagar Mala project is started by the Govt. of India so that port-led development can be amplified and coastlines can be developed to contribute in India's growth, providing a project outlay of US\$ 10 billion
5. The Smart Cities Mission having a project outlay of US\$ 7.69 billion is progressing, with Special Purpose Vehicles for 19 cities already set up.
6. To cater to international and domestic traffic the Aviation industry is working to achieve a target of becoming 3rd largest by 2030.

INNOVATION AND R&D

The Tech Startups in India are expected to reach 11,500 in 2020 from 4,300 in 2015 and investment in innovation and R&D offers large 3rd largest tech driven Start-up ecosystem globally.

1. The Government has launched "Start-up India" initiative which aims at fostering entrepreneurship and promoting innovation by creating an ecosystem that is conducive for growth of Start-ups.
2. The Policy of Intellectual Property Rights Policy, launched in May 2016 has the following features:
 - Comfort of Access using World-class IT enabled patent offices
 - Strong TRIPS compliant policy framework
 - Internationally acclaimed systems for

International Searching and Preliminary Examination of patent applications

- Expansion of Manpower: 721 additional technically competent Patent Examiners appointed
- The time duration for examination of patents to come down to 18 months from 7 years by March, 2018
- The time duration for examination of trademarks to come down to 1 month from 13 months by March, 2017

Ease of Doing Business

India has moved up 12 places in the World Bank's Doing Business ranking 2016 released in October, 2015 because of improved business processes and procedures.

- Instead of 10 days the Incorporation of a company is reduced to 1 day
- Instead of 180 days Power connection provided within a mandated time frame of 15 days
- The documents for exports and imports got reduced to 3 from 11
- The Validity of industrial license has been extended from 3 years to 7 years
- The new bankruptcy law, providing for simple and time-bound insolvency process to be operational by 2017
- Single tax framework Goods and Services Tax (GST) by April, 2017
- There will be Permanent Residency Status for foreign investors for 10 years

Other Reforms

1. Online portals for Employees State Insurance Corporation (ESIC) and Employees Provident Fund Organization (EPFO) for
 - o There will be Real-time registration
 - o Payments will be done through 56 accredited banks
 - o For environmental and forest clearances there application process will be Online
2. Indian Trade Portal has been launched by Department of Commerce, Government of India. The significant feature of this portal is to be a single point for relevant information on

measures other than tariff called the non-tariff measures like standards, technical regulations, conformity assessment procedures, sanitary and Phytosanitary measures which may affect trade adversely.

3. To monitor, promote and handhold investors during the entire life-cycle of the business an Investor Facilitation Cell has been created in 'Invest India'
4. To expedite investment proposals from Japan and South Korea the Department of Industrial Policy and Promotion has also set up Japan Plus and Korea Plus respectively.

NEW SECTORS

FDI Reforms

FDI encourages country's commercial development and creates more favourable environment for the industry to flourish

1. **Defence:** FDI up to 49% under automatic route and above 49% through Government route
2. **Civil Aviation:** For Civil Aviation, 100% FDI under automatic route in Greenfield Projects and 74% FDI in Brownfield Projects under automatic route beyond 74% for Brownfield Projects is under government route.
3. **Broadcasting:** New sectoral caps and entry routes are as under:
 - o Broadcasting Carriage Services & down-linking of news channels: 100% FDI
 - o Cable Networks: 100% FDI and in News channels: 49% FDI
4. **Banking:** In banking sector, FDI up to 74% with 49% under automatic route rest through government route is allowed.
5. **Railways:** In operation, maintenance and construction of Rail Infrastructure projects 100% FDI under automatic route is permitted.
6. **Construction:** 100% FDI through automatic route and Removal of minimum floor area & minimum capital requirement
7. **Pharmaceuticals:** The present FDI policy on pharmaceutical sector provides for 100% FDI under automatic route in Greenfield pharma. FDI up to 74% under automatic route and 100% under government approval in

Brownfield pharma is allowed.

8. **Plantation:** Coffee, rubber, cardamom, palm oil tree and olive oil tree plantations has opened for 100% foreign investment under automatic route.
9. **Telecom:** In Telecom sector, FDI up to 100% with 49% under automatic route is permitted
10. **Insurance & Pension:** To increase the sectoral cap of foreign investment from 26% to 49% FDI Policy has been reviewed with foreign investment up to 26% to be under automatic route.
11. **Medical Devices:** Permission for 100% FDI under automatic route for manufacturing of medical devices is given.
12. **E-Commerce:** Single brand retail trading entity permitted for B2C e-commerce and e-commerce.
13. **Retail:** Under automatic route 49% and otherwise 100% FDI is allowed. Subject to Government approval sourcing norms can be relaxed in case of 'state-of-art' and 'cutting-edge technology'. 100% FDI is now permitted under automatic route in Duty Free Shops located and operated in the Customs bonded areas.

GOVERNMENT OF INDIA SUPPORT FOR INNOVATION AND ENTREPRENEURSHIP IN INDIA

The Government has undertaken several measures and formulated various policies to nurture a culture of invention and entrepreneurship in the country. The foremost challenge facing the country is Job creation. India, with a significant and unique demographic advantage has vast potential to innovate, raise entrepreneurs and create jobs for the benefit of the nation and the world.

The Government of India has created numerous programmes and opportunities to nurture innovation in the recent years ranging from engaging with academia, industry, investors, small and big entrepreneurs, non-governmental organizations to the most underserved sections of society.

A few of India's efforts at promoting entrepreneurship and innovation are:



Start up India: Through this initiative, the Government promotes entrepreneurship by mentoring, nurturing and facilitating startups throughout their life cycle. Since its launch in January 2016, the initiative has successfully given a head start to numerous aspiring entrepreneurs. With a 360 degree approach to enable startups, the initiative provides a all-inclusive four-week free online learning program, has set up research parks, incubators and startup centres across the country by creating a strong network of academia and industry bodies.

A 'Fund of Funds' has been created to help startups gain access to funding, to build an ecosystem in which start ups can innovate and excel without any barriers.

- **Make in India:** India was one of the largest undertaken in recent history. The Make in India initiative was launched in September 2014 in order to transform India into a global design and manufacturing hub. It came as a powerful call to India's citizens and business leaders, and an invitation to potential partners and investors around the world to fix out-dated processes and policies, and to centralize information about opportunities in India. This has led to renewed confidence in India's capabilities among potential partners abroad, business community within the country and citizens at large. Among several other measures, the initiative has guaranteed the replacement of obsolete charters with transparent and user-friendly systems.
- **Atal Innovation Mission (AIM):** AIM is an attempt by the Government to encourage a culture of invention and entrepreneurship in India. It helps in the promotion of world-class Innovation Hubs, Grand Challenges, start-up businesses and other self-employment activities.

AIM recently launched Atal Tinkering Labs (ATL) all over the country in order to foster interest, creativity and imagination right at the school, ATLs are workspaces where students can work with tools and equipment to gain hands-on training in the concepts of STEM (Science, Technology, Engineering and Math).

Another programme of AIM is Atal Incubation Centres (AICs) which is designed to build innovative start-up businesses as

accessible and sustainable enterprises. These centres provide world class incubation facilities with appropriate physical infrastructure in terms of capital equipment and operating facilities. These incubation centres, with a presence across India, provide access to sectoral experts, business planning support, seed capital, industry partners and trainings to encourage innovative start-ups.

- **Support to Training and Employment Programme for Women (STEP):** The Ministry of Skill Development & Entrepreneurship and NITI Aayog recently redrafted the Guidelines of the 30-year-old initiative.

The initiative reaches out to all Indian women above 16 years of age. The programme imparts skills in several sectors like embroidery, travel and tourism, hospitality agriculture, horticulture, and IT services.

- **Jan Dhan- Aadhaar- Mobile (JAM):** In order to make banking services accessible down to the last mile, JAM is introduced. It is a technological intervention that enables direct transfer of subsidies to intended beneficiaries. It removes all intermediaries and leakages in the system. JAM provides for accounts to all underserved regions
- **Digital India: In order** to makes all government services available electronically and for modernization of the Indian economy, the Digital India initiative was launched by the Government. The initiative tends to transform India into a digitally-empowered knowledge economy. This initiative aims to make available high-speed internet down to the grassroots. It is introduced to improve citizen participation in the digital and financial space and to improve ease of doing business. Digital India hopes to achieve effectiveness and efficiency in a country which is having diversity.
- **Biotechnology Industry Research Assistance Council (BIRAC):** It is a not-for-profit Public-Sector Enterprise which was set up by Department of Biotechnology in order to strengthen and empower emerging biotechnology enterprises. It aims to embed strategic research and innovation in all biotech enterprises, and bridge the existing gaps between industry and academia. The ultimate goal is to develop high-quality, yet affordable,

products with the use of cutting edge technologies. BIRAC has initiated partnerships with several national and global partners for building capacities of the Indian biotech industry, particularly start-ups and SME's, and has facilitated several rapid developments in medical technology.

- **Department of Science and Technology (DST):** For all major projects requiring scientific and technological intervention, the Department of Science and Technology comprises several arms that work across the spectrum on all major projects. It provides technological solutions to address challenges and improve quality of life of the elderly in India through the application of science and technology.

The *ASEAN-India Science, Technology and Innovation Cooperation* works to narrow the development gap and enhance connectivity between the ASEAN countries.

- **Stand-Up India:** For the benefit of India's underprivileged Stand-Up India was launched in 2015. It seeks to leverage institutional credit, enable economic participation of, and share the benefits of India's growth, among women entrepreneurs, Scheduled Castes and Scheduled Tribes. At least one woman and one individual from the SC or ST communities are granted loans between Rs.1 million to Rs.10 million to set up Greenfield enterprises in manufacturing, services or the trading sector. The portal also acts as a digital platform for small entrepreneurs. It also provides information on financing and credit guarantee.
- **Trade related Entrepreneurship Assistance and Development (TREAD):** In our country, women have been the most deprived and oppressed section of the society with regard to access to and control over resources. In order to alleviate the problems faced by them the Govt. of India launched a scheme entitled "Trade Related Entrepreneurship Assistance and Development" (TREAD) during the 9th plan period which has slightly been modified and is now put in operation. The TREAD programme enables credit availability to interested women through non-governmental organizations (NGOs). Women can receive support of registered NGOs in both accessing loan

facilities, and receiving counselling and training opportunities to kick-start proposed enterprises

- **Pradhan Mantri Kaushal Vikas Yojana (PMKVY):** It is a Skill Certification initiative that intends to train youth in industry-relevant skills to enhance employability. This is a flagship initiative of the Ministry of Skill Development & Entrepreneurship (MSDE). Persons with previous learning experience or expertise will be certified and assessed under Recognition of Prior Learning (RPL). The Training and Assessment fees are completely paid by the Government under this scheme.
- **National Skill Development Mission: With a mission to build skill India, National Skill Development** was launched in July 2015. It aims to build synergies across sectors and States in skilled industries. It is designed to accelerate decision-making across sectors to provide skills at scale, without compromising on quality or speed.

The seven sub-missions proposed in the initial phase to guide the mission's skilling efforts across India are: (i) Institutional Training (ii) Infrastructure (iii) Convergence (iv) Trainers (v) Overseas Employment (vi) Sustainable Livelihoods (vii) Leveraging Public Infrastructure. Click here to download the framework for implementation.

- **Science for Equity Empowerment and Development (SEED):** Science For Equity Empowerment and Development has the broad objectives of providing opportunities to motivated scientists and field level workers. It takes up action oriented and location explicit projects aiming towards socio-economic upliftment of poor and disadvantaged sections of the society through appropriate science and technology interventions especially in the rural areas. Under this program efforts have been made to associate concerned National Labs or other specialist S&T institutions with each major program so as to build-in expert input, utilize national S&T infrastructure and link it up with grassroots S&T interventions/initiatives.

CONCLUSION

The Indian economy is being redefined by the start-ups. India is highly conducive to entrepreneurial activity due to its favourable



demography, open economic environment and culture of entrepreneurialism. Indian economy has the capacity to push the GDP to 25% in next few years. The government of India has taken number of steps to further encourage investment and further improve business climate. Favourable investment climate, assistance of financial services, relaxes and industry favourable

government policies are the essential constituents of “MAKE IN INDIA”. However, more proactive engagement between startup and established organizations can help startups harden their business models and accelerate growth. Their mutual success will drive India toward an ever-more dynamic future.

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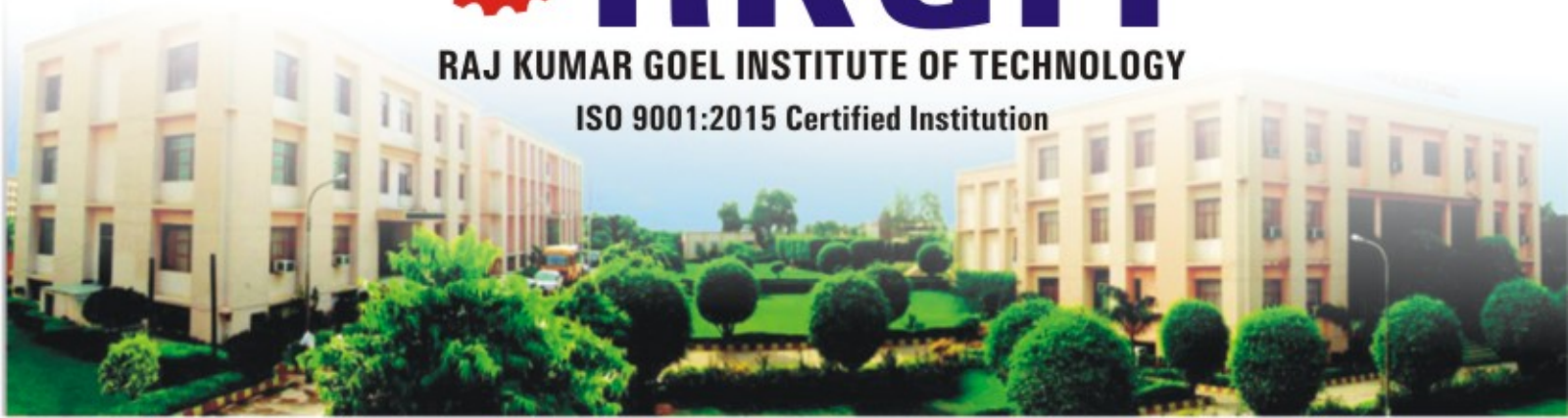
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