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'The common facts of today are the products of yesterday's Research'

Research is the attitude towards change, change for a better tomorrow. It constantly keeps us to find what more good we can do over the present state of situation. It makes us willing to find the best and promises empowerment. So, the contribution of research and researchers are never-ending.

The current issue of Luminous Journal 2(2) is an effort to acknowledge the praiseworthy work done by the researchers over the world. The present issue of this multidisciplinary research journal has papers on diverse fields of subjects like Science, Arts, Management, Commerce, Humanities, Law, etc.

Dr. Anil K. Mathur, Ms. Rashmi Sharma and Dr. Ajay M. Chaturvedi, in their paper they discoursed about conventional and microwave assisted synthesis and characterization of some chalcones.

Dr. Ajai Kumar Jain, Dr. Anita Jain and Ms. Sunaina Lashkari, presented their views on employee's wellbeing and performance and discussed different models on this approach.

In his paper Dr. Vivek Singh talked about architectural monuments within sacred Jami Mosque complex at Fatehpur Sikri.

Mr. Manish Vyas in his paper conferred about innovative marketing strategy in Indian FMCG market.

Dr. Reva Prasad Mishra presented his views on impact of happiness on humans to increases intentional consciousness which finally leads to happy life at work and family.

Dr. Vinod Patidar reviewed about Legal control of cybercrimes against E-banking in India. This paper highlights the impact of Cyber Security Laws on E-Banking.

In his paper Mr. Sachin Verma discussed about novel international challenges to patent system and conservation of genetics resources.

Right to health is very significant for individual's as well as for the nation's development. Ms. Anita Parmar in her paper has disserted this key issue by giving examples of various legal cases.

Role of women entrepreneurs in the development of India was discussed by Dr. Kaynat Tawar, Mr. Imtiyaz Rashid Lone and Mr. Mohammad Shafi Sheikh.

Mr. Reyaz Maqbool Bhat in his paper presented his views on women empowerment in context with Indian legal Indian and secular philosophical perspective.

Mr. Pankaj Dwivedi raised the issue of status of women in *Panchayati Raj*. In his paper he discussed the apprehensions of half of the population of our country upon various prospects.

Dr. Sneha Rajput, Mr. Dileep Pratap and Krishna Singh shared their views about impact of apparel website attributes on impulse purchase in Gwalior region.

The condition of Institutional Agricultural Credit was reviewed by Dr. Ruchika Khandelwal and Dr. Ashish Mehta.

Investors' concerns regarding mutual funds was discussed by Dr. S C Moonat. He discussed the investor's sentiments in current business environment.

Dr. Namrata Khandelwal in her paper disserted about challenges and opportunities in Rural Marketing in India.

Ms. Kamini Agrawal elaborated data reducts through non-classical sets. In her paper an effort was made to find important degree of the attributes and their relationship with other attributes through reducts.

In their paper Ms. Leena Soni and Dr. Pragati Jain discussed about the rudiments of Soft Set and very well explained the physiognomies of Soft Set with different definitions.

At the last, I would like to offer words of gratitude to all the contributors, members of the editorial board, our chief-patron, patron, staff of printing press, designing team and to the publisher of the journal for their constant support and motivation.

'Let Your Light Shine'

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A Comparative Study on Conventional and Microwave Assisted Synthesis and Characterization of Some Chalcones

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Abstract

Claisen- Schmidt condensation has been carried out for the synthesis of some chalcones using conventional and microwave assisted method. Microwave assisted synthesis provides a considerable increase in the reaction rate, better yields and helps to improve the worth of economy and its of eco-friendly nature. Synthesized chalcones were characterized on the basis of elemental analysis, molecular weight determination and spectral data like ¹H-NMR, IR.

Keywords: Microwave, Chalcones, Claisen – Schmidt condensation, IR, ¹H-NMR.

Introduction

Over the years various innovative methods have been devised to speed up the chemical reactions. In these environmentally conscious days the development of technology is directed towards eco-friendly methods. The usage of microwave energy to accelerate the organic reactions is of increasing interest and offers several advantages over conventional heating techniques.¹ Synthesis of the molecules which normally requires a long time can be achieved conveniently and rapidly in microwave oven. Solvent free condition is especially suitable for microwave activation of molecules. Thus, the use of microwave energy for the synthesis of organic compounds forms a part of green chemistry.

Chalcones having α,β -unsaturated carbonyl group are one of the important biocides and versatile synthones for various chemical transformations. Most of the Chalcones are highly biologically active with a number of pharmacological and medicinal applications.² Chalcones have been used as anti-AIDS agents³, cytotoxic agents⁴, antimalarials⁵, anti-inflammatory⁶ and anti-tumor agents.⁷ In the present investigation we have carried out the synthesis of some Chalcones by conventional as well as through MWI method via classical base catalysed “Claisen- Schmidt condensation reaction”. This reaction is generally carried out in presence of base like NaOH or KOH which are harmful, toxic and polluting. Therefore, in the present investigation we have used anhydrous K₂CO₃^{8,9,10} as the condensing agent which is cheap, non-toxic and easy to use. Furthermore,

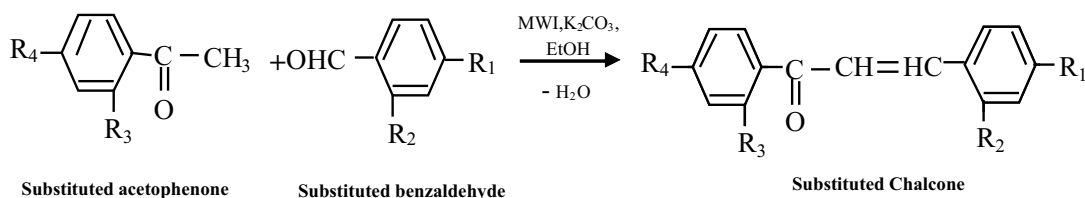
the reaction can be easily carried out under solvent free condition under microwave irradiation so as to minimize the pollution. In comparison to the conventional method the yields obtained in this method were higher and cleaner products were obtained, and the reaction was completed within 3-5 minutes.

Material and Methods

All chemicals used were of A.R. grade and were obtained from Acros Organics, HPLC, SD fine chemicals and CDH. Melting points were determined in open glass capillary tubes. The purity of products and progress of the reaction was checked by TLC on silica gel plate. The reaction was carried out in modified domestic microwave oven.

Procedure for the preparation of chalcones:

A. Conventional Method: A hot solution of caustic soda (4.4 gm in 40 ml water), rectified spirit (100ml) and substituted benzaldehyde (0.1mol) were taken in a 250ml round bottom flask, kept in ice cold water. Substituted acetophenone (0.1mol) was added dropwise with constant stirring, keeping the temperature, below 25°C. The Mixture was stoppered securely and stirred for 2-3 hrs, and then it was kept in freeze overnight, a yellow coloured crystalline solid separated. It was acidified with dilute (10%) hydrochloric acid keeping the contents in ice bath. The solid then filtered, washed with water until the filtered washing became neutral to litmus, finally washed with ice cold spirit, dried and recrystallized from ethanol to afford yellow shiny crystals which were dried over anhydrous calcium chloride in a desiccator. The analytical and physical data of the synthesized compounds is summarized in Table-1.



Where, $\text{R}_1, \text{R}_2, \text{R}_3, \text{R}_4 = \text{-H, OH, -OCH}_3, \text{-Cl or -NO}_2$ in different chalcones.

Scheme: 1

Table: 1- Comparative Synthetic, analytical and physical data of chalcones

Table: 1- Comparative Synthetic, analytical and physical data of chalcones

Pro duct	Molecular formula	Name	Colour	M.P. (°C)	Yield		Time required		Solvent Used	
					Conv. (%)	MWI (%)	Conv. (Hour)	MWI (Min.)	Conv. (ml)	MWI (ml)
1a	C ₁₅ H ₁₂ O	Benzalacetophenone chalcone	Yellow	56	70	82	2-3	4-6	40	120
1b	C ₁₆ H ₁₄ O ₂	4-methoxy chalcone	Yellow	78	45	58	2-3	4-6	35	110
1c	C ₁₅ H ₁₂ O ₂	2-hydroxy chalcone	Yellow	152	54	65	2-3	4-6	35	110
1d	C ₁₆ H ₁₄ O ₃	4'-methoxy-2-hydroxy chalcone	Pale Yellow	144	58	70	2-3	4-6	35	110
1e	C ₁₅ H ₁₁ ClO	4-chloro chalcone	Pale Yellow	96	75	85	2-3	4-6	40	120
1f	C ₁₅ H ₁₀ Cl ₂ O	4',4-dichloro chalcone	Pale Yellow	110	83	90	2-3	4-6	45	125
1g	C ₁₆ H ₁₃ ClO ₂	4'-methoxy-4-chloro chalcone	Pale Yellow	115	82	90	2-3	4-6	45	125
1h	C ₁₆ H ₁₃ ClO ₂	4'-chloro-4-methoxy chalcone	Pale Yellow	112	81	92	2-3	4-6	45	125
1i	C ₁₆ H ₁₄ O ₂	4'-methoxy chalcone	Yellow	81	79	84	2-3	4-6	45	125
1j	C ₁₅ H ₁₁ ClO ₂	2'-hydroxy-4-chlorochalcone	Yellow	131	84	90	2-3	4-6	25	75

Spectral Data of Compounds

- (1a) Benzalacetophenone chalcone: IR $\nu(\text{cm}^{-1})$: 3082 (C-H aromatic), 1683 (C=O), 1576 (C=C); $^1\text{H-NMR } \delta(\text{ppm})$: 7.56 (d, 1H α), 7.99 (d, 1H β), 7.01–7.5(m, 9H, Ar-H).
- (1b) 4-methoxy chalcone: IR $\nu(\text{cm}^{-1})$: 3029 (C-H aromatic), 1659 (C=O), 1582 (C=C), 1171 (OCH₃); $^1\text{H-NMR } \delta(\text{ppm})$: 3.72 (s, 3H, OCH₃), 6.81 (d, 1H α), 7.92 (d, 1H β), 6.72–8.13 (m, 8H, Ar-H).
- (1c) 2-hydroxy chalcone: IR $\nu(\text{cm}^{-1})$: 3384 (OH), 3084 (C-H aromatic), 1686 (C=O), 1578 (C=C); $^1\text{H-NMR } \delta(\text{ppm})$: 7.52 (d, 1H α), 7.94 (d, 1H β), 7.04–7.8(m, 9H, Ar-H), 12.2 (s, 1H, OH).
- (1d) 4'-methoxy-2-hydroxy chalcone: IR $\nu(\text{cm}^{-1})$: 3385 (OH), 3029 (C-H aromatic), 1659 (C=O), 1582 (C=C), 1171 (OCH₃); $^1\text{H-NMR } \delta(\text{ppm})$: 3.72 (s, 3H, OCH₃), 6.81 (d, 1H α), 7.92 (d, 1H β), 6.72–8.13 (m, 8H, Ar-H), 12.76 (s, 1H, OH).
- (1e) 4-chloro chalcone: IR $\nu(\text{cm}^{-1})$: 1692 (C=O), 1618 (C=C), 835 (Ar-Cl); $^1\text{H-NMR } \delta(\text{ppm})$: 7.48 (d, 1H α), 8.14 (d, 1H β), 6.35–8.2 (m, 8H, Ar-H)
- (1f) 4',4-dichloro chalcone: IR $\nu(\text{cm}^{-1})$: 1690 (C=O), 1614 (C=C), 836 (Ar-Cl); $^1\text{H-NMR } \delta(\text{ppm})$: 7.42 (d, 1H α), 8.16 (d, 1H β), 6.32–8.4 (m, 8H, Ar-H)
- (1g) 4'-methoxy-4-chloro chalcone: IR $\nu(\text{cm}^{-1})$: 3012 (C-H aromatic), 1618 (C=O), 1591 (C=C), 1162 (OCH₃), 836 (Ar-Cl); $^1\text{H-NMR } \delta(\text{ppm})$: 3.79 (s, 3H, OCH₃), 7.67 (d, 1H α), 7.42 (d, 1H β), 6.32–8.33 (m, 8H, Ar-H).
- (1h) 4'-chloro-4-methoxy chalcone: IR $\nu(\text{cm}^{-1})$: 3010 (C-H aromatic), 1616 (C=O), 1594 (C=C), 1164 (OCH₃), 836 (Ar-Cl); $^1\text{H-NMR } \delta(\text{ppm})$: 3.76 (s, 3H, OCH₃), 7.62 (d, 1H α), 7.44 (d, 1H β), 6.30–8.36 (m, 8H, Ar-H).
- (1i) 4'-methoxy chalcone: IR $\nu(\text{cm}^{-1})$: 3029 (C-H aromatic), 1659 (C=O), 1582 (C=C), 1171 (OCH₃); $^1\text{H-NMR } \delta(\text{ppm})$: 3.72 (s, 3H, OCH₃), 6.81 (d, 1H α), 7.92 (d, 1H β), 6.72–8.13 (m, 8H, Ar-H).
- (1j) 2'-hydroxy-4-chlorochalcone: IR $\nu(\text{cm}^{-1})$: 3462 (OH), 3010 (C-H aromatic), 1661 (C=O), 1581 (C=C); $^1\text{H-NMR } \delta(\text{ppm})$: 7.82 (d, 1H α), 7.53 (d, 1H β), 6.29–8.21 (m, 8H, Ar-H), 10.18 (s, 1H, OH).

Result and Discussion

The synthesis of chalcones was accomplished according to the Claisen-Schmidt condensation of substituted acetophenone with substituted aromatic aldehyde under microwave irradiation. Claisen-Schmidt condensation is a versatile method for preparation of α,β -unsaturated carbonyl compounds (Chalcones). The reaction is generally carried in the presence of aqueous alkali.¹¹⁻¹⁷ The concentration of the alkali generally lies between 10-40%. In the present investigation we have carried out the condensation of substituted acetophenone and substituted benzaldehyde in the presence of anhydrous potassium carbonate. It is nontoxic, non-expensive and easy to use reagent. In this work, we have demonstrated the synthesis of chalcones using microwave irradiation also by conventional method. Over the conventional method, use of microwave has shown the advantages like high yields, relatively short reaction times, low cost, simple experimental and isolation procedures, and finally, it is in agreement with the green chemistry protocols. The obtained data during the study will be certainly useful to synthesizing new chalcone derivatives and helps in understanding of scope.

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A Review Study on Employee's Wellbeing and Performance and their Different Models

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Abstract

The term 'Wellbeing' has been in use since last three centuries. It can be defined as a state of being healthy or successful, feeling good, living safely and healthily. The word wellbeing has been incorporated in the definition of health given by World Health Organization in 1949. There are different view on definition, types and linkages of wellbeing with employees' performance. The author has ventured into review study of this interesting but complicated topic. This review study includes the existing literature on employee wellbeing and performance, models and scales of measurement of wellbeing and application in different sectors for rating employee's wellbeing.

Keywords: Wellbeing, Employees' Performance, Models of wellbeing, PREMA, etc.

Introduction

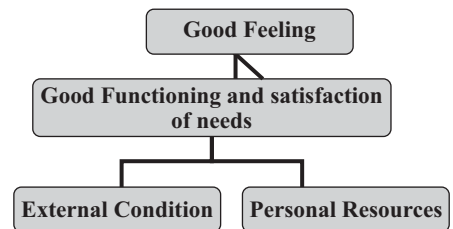
A healthy business is directly indicates enriched employee's good health and well being yielding higher productivity (Institute of directors, 2006). It is crucial for organizations to assess employee job satisfaction, since low satisfaction may initiate detrimental responses amongst the workforce, resulting in significant economic burden. Satisfaction has been found to be consistently linked with levels of employee performance, with decreased satisfaction leading to decreased performance (Judge, Thoresen, Bono, & Patton, 2001). It is in an organization's best economic interest to promote satisfaction, since satisfied workers are more likely to deliver an increased level of performance. Although research has found a substantial link between satisfaction and performance, this relationship is far more complex than it was first supposed with evidence suggesting that well-being is a significant moderator within this relationship (Wright & Cropanzano, 2000; Wright, Cropanzano & Bonett CIPD (Chartered Institute of Personnel and Development) shows that the prime area of concern for organizational growth is work area enhancement through intervention employee's wellbeing and health policies. The organization need to work over the clear definition of employee performance and happiness, as if they efficiently increase any of these factors they will surely have higher employee wellbeing.

for Management Development, (2002), Employee well-being involves maintaining a healthy body by making healthy choices about diet, exercise and leisure, Developing an attitude of mind that enables the employee to have self-confidence, self-respect and to be emotionally resilient, Having a sense of purpose, feelings of fulfillment and meaning, Possessing an active mind that is alert, open to new experiences, curious and creative, Having a network of relationships that are Supportive and nurturing

Basic Models of Wellbeing-

1. Diener: Tripartite model of Subjective Well-being: Diener's tripartite model of subjective well-being is one of the most comprehensive models of well-being in psychology. It was synthesized by Diener in 1984, positing "three distinct but often related components of wellbeing:

- Frequent positive effect,
- Infrequent negative effect
- Cognitive evaluations



According to Diener and Suh, subjective well-being is based on the idea that how each person thinks and feels about his or her life is important.

2. Carol Ryff: Six-factor Model of Psychological Well-being

Ryff's multidimensional model of psychological well-being postulated six factors which are key for well-being:

Self-acceptance

Personal growth

Purpose in life

Environmental masteryAutonomy

Positive relations with others



3. Corey Keyes: flourishing

According to Corey Keyes, who collaborated with Carol Ryff, mental well-being has three components, namely

- Emotional or subjective well-being (also called hedonic well-being),
- Psychological well-being,

Objectives of the Study

- To study what is Employee's Wellbeing also factors affecting Employee's Wellbeing.
- Existing Model of Wellbeing.

Methodology

This is a secondary data based descriptive study to understand Employees' wellbeing and its existing Models. The sources of data would be the related books, internet, project reports of various agencies, programs and applications in mobile devices etc. Tables and Charts based on secondary data will be drawn with help of MS-office

Limitations

- Inherent limitations of secondary data based study.
- The literature is so exhaustive that it is difficult to conceptualize the linkage.

Literature Review

According to oxford English dictionary (2005) 'Wellbeing is the state of being comfortable, healthy or happy' with the time frame this definition refined and reflect the context of work and employment. The word wellbeing is firstly came into existence in 1613 but the terminology of wellbeing introduced in 1561 which meant as a state of being healthy or successful feeling good, living safely and healthily. So it's not a recent or fashionable term as the terminology of wellbeing has existed for more than 300 years. Oxford English dictionary also tells that the term came into English from French word named "bein-etre", simply means 'good being' equivalent to modern Latin expressions 'bene-esse'. Employees are resources in organizations, and as such they need to be trained and developed properly in order to achieve an organization's goals and expectations (Brewster, 2007). The term "wellbeing" covers complete spectrum of an individual lifestyle, job profiles and social relationship. WHO states that well being as a term which indicates all three parameter for a required for a good health i.e. physical, mental and social wellbeing According to the World Health Organization, health is "a state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity". This definition is part of the Preamble to the Constitution of the World Health Organization, as adopted by the International Health Conference on 7 April 1948. Such a description of wellbeing is important, as it highlights the broader definition of the term, as encompassing physical, mental, and social health. While According to Canadian Centre

- Social well-being (together also called eudaimonic well-being).

Emotional well-being concerns subjective aspects of well-being, in concerto, feeling well, whereas psychological and social well-being concerns skills, abilities, and psychological and social functioning.

4. Seligmann: positive psychology

Well-being is a central concept in positive psychology. Positive psychology is concerned with eudaimonic, "the good life", reflection about what holds the greatest value in life – the factors that contribute the most to a well-lived and fulfilling life. While not attempting a strict definition of the good life, positive psychologists agree that one must live a happy, engaged, and meaningful life in order to experience "the good life".

Martin Seligman referred to "the good life" as "using your signature strengths every day to produce authentic happiness and abundant gratification".

5. Three paths to happiness

In Authentic Happiness (2002) Seligman proposed three kinds of a happy life which can be investigated-

- Pleasant life:** research into the Pleasant Life, or the "life of enjoyment", examines how people optimally experience, forecast, and savor the positive feelings and emotions that are part of normal and healthy living (e.g., relationships, hobbies, interests, entertainment, etc.). Despite the attention given, Martin Seligman says this most transient element of happiness may be the least important.
- Good Life:** investigation of the beneficial effects of immersion, absorption, and flow, felt by individuals when optimally engaged with their primary activities, is the study of the Good Life, or the "life of engagement". Flow is experienced when there is a positive match between a person's strength and their current task, i.e., when one feels confident of accomplishing a chosen or assigned task.
- Meaningful Life:** inquiry into the Meaningful Life, or "life of affiliation", questions how individuals derive a positive sense of well-being, belonging, meaning, and purpose from being part of and contributing back to something larger and more permanent than themselves (e.g., nature, social groups, organizations, movements, traditions, belief systems).

These categories appear neither widely disputed nor adopted by researchers across the 12 years that this academic area has been in existence.

PERMA Theory

In Flourish (2011) Seligman argued that the last category, "meaningful life", can be considered as 3 different categories. PERMA is: Positive Emotions, Engagement, Relationships, Meaning and purpose, and Accomplishments.

- A. **Positive** emotions include a wide range of feelings, not just happiness and joy. Included are emotions like excitement, satisfaction, pride and awe, amongst others. These emotions are frequently seen as connected to positive outcomes, such as longer life and healthier social relationships.
- B. **Engagement** refers to involvement in activities that draws and builds upon one's interests. The task being done needs to call upon higher skill and be a bit difficult and challenging yet still possible. Engagement involves passion for and concentration on the task at hand and is assessed subjectively as to whether the person engaged was completely absorbed, losing self-consciousness.
- C. **Relationships** are all important in fueling positive emotions, whether they are work-related, familial, romantic, or platonic. Humans receive, share, and spread positivity to others through relationships. They are important not only in bad times, but good times as well. In fact, relationships can be strengthened by reacting to one another positively. It is typical that most positive things take place in the presence of other people.
- D. **Meaning** is also known as purpose, and prompts the question of "why". Discovering and figuring out a clear "why" puts everything into context from work to relationships to other parts of life. Finding meaning is learning that there is something greater than one's self. Despite potential challenges, working with meaning drives people to continue striving for a desirable goal.
- E. **Accomplishments** are the pursuit of success and mastery. Unlike the other parts of PERMA, they are sometimes pursued even when accomplishments do not result in positive emotions, meaning, or relationships. That being noted, accomplishments can activate the other elements of PERMA, such as pride, under positive emotion. Accomplishments can be individual or community-based, fun- or work-based.

Conclusion

The employee wellbeing has been defined and explored extensively in last three centuries. The types and factors affecting wellbeing have been multiple in nature and number. Employer can influence this wellbeing by providing various types of facilities in organization.

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Architectural Monuments within Sacred Jami Mosque Complex at Fatehpur Sikri

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Abstract

Fatehpur Sikri is creation of Akbar which represent fine craftsmanship of Indo-Muslim Architecture which looks like lotus in desert. The monumental remains of Fatehpur Sikri represent that this town was a splendid achievement of town planning, design and craftsmanship. The buildings were skillfully planned also represent the Akbar vision of Hindu Muslim Unity. Palaces of Jodha Bai, Birbal represent Akbar's secular policy and clear vision about his method of ruling. Fatehpur Sikri town planning is one of the most advanced town planning in India. Tomb of Sheikh Salim Chisti represent the growth of Sufism in India as well as change of Islamic thought and culture which was earlier according to Sharabut Akbar Din-I-Illai concept is also found in Fatehpur Sikri.

Keywords: Architecture, Historical Monuments, Art, Culture, Fatehpur Sikri, Bulund Darwaja, Sheikh Salim Chisti Tomb, Jodha Bai Palace, Birbal Palace, PanchMinar, etc.

Brief History of Fatehpur Sikri

Fatehpur Sikri is located some 37km west of Agra city, on a rocky outgrowth of the upper Vindhyan range. Town of Fatehpur Sikri is a unique example of art of town planning in India. Like the cactus flower that for a moment adorns the desert, so was the town of Fatehpur Sikri, having a brief span of glory and abandoned only after 15 years of its construction, due to scarcity of water in the town. But it is true that no town like Fatehpur Sikri was ever erected before or can be erected again. The magnificent town once the capital of Mughal Empire still stands majestically, almost untouched by the passage of time¹.

The monumental remains of Fatehpur Sikri represent that this town was a splendid achievement of town planning, design and craftsmanship. The buildings were skillfully planned in accordance to the ridge and the slope over which the town is spread. The building material i.e. red sand stone was selected in accordance with its availability and climatic conditions. The buildings were designed according to the need of the occupant and its usage keeping in mind proper ventilation for light and air, sanitation needs, social

¹Rizvi, S.A..A & Flynn, V.J.A, Fatehpur Sikri, Archaeological Survey of India, New Delhi, 1992, p.01

needs like the purdah for women.¹ All the buildings are perfectly balanced, unified and homogenous in plan. The orientation of the building is on north to south axis of the ridge either north or east facing in accordance with terrain geology and climate conditions. Fatehpur Sikri town is spread over a ridge and surrounded by a fortification on three sides, while an artificial lake protected the fourth side. This wall is pierced by eight gateways. Since the town is spread over a ridge, therefore the monuments are not placed at an even level, hence they are planned on different terraces or levels.²

Sheikh Salim Chishti, who had rightly predicted the birth of the son of the childless emperor. Akbar's first son was born on 1569 A.D. and was named as Salim in honour of Sheikh Salim Chishti. On Akbar's return from a pilgrimage to Ajmer he stayed in Sikri village where Khanqah of Sheikh Salim was located he announced his decision to erect a new city in Sikri. After Akbar's conquest of Gujarat in June 1573, the place was named as Fatehpur a victory town.³

But history of Fatehpur Sikri dates back to 12th centuries at the time of Rajput rulers. There are still survived ruins of a temple dating back to 12th centuries. Also, two mosques in the village of Sikri bear inscription saying that mosque were built in 1314 under Mohd. Khilji, which proves existence of Sikri village before Akbar.

There are also references that Babur renamed the village sikri as shukri derived from an Arabic word shukr meaning returning thanks to the god. Before Akbar's announcing the township of Fatehpur Sikri this place was the dwelling place and khanqah of Shiekh Salim Chishti, where he used to carry out his religious practices.⁴

Architectural Monuments of Fatehpur Sikri

The monuments of Fatehpur Sikri can be divided into four main categories.

- Monument of the Sacred complex
- Monuments of the Royal complex
- Monuments of the Imperial Harem
- Other monuments surrounding the main complex

Monuments of Sacred Complex

- Jami Masjid

¹Koch, Ebba, *Mughal Arcitecture*, Prestel, Germany, 1991, p.13

²Ibid, p. 02

³Rizvi, S,A,A, & Flynn, V,J,A *Fatehpur Sikri*, Archaeological Survey of India, New Delhi 1992 p. 8-9

⁴Rizvi, S,A,A, & Flynn, V,J,A *Fatehpur Sikri*, Archaeological Survey of India, New Delhi 1992 p. 8-9

- Ablution Tank
- Buland Darwaja
- Badshahi Darwaja
- Tomb of Sheikh Salim Chishti
- JamatKhana
- ZananaRauza
- The Birka (Cistern)

This complex is located at the highest point of the ridge. This was the place where Sheikh Salim Chishti originally lived. Therefore, latter on this place is converted into sacred complex. The most important building of this sacred complex, rather of Fatehpur Sikri town is Jami Masjid, which was the main congregational mosque of the town. This mosque contains two monumental gateways, Buland Darwaja which was built to commemorate Akbar's victory over Deccan and Badshahi Darwaja, which was the usual doorway of the mosque. This mosque enclosed a vast courtyard, which contains a marble jewel called Tomb of Salim Chishti.¹

On the right side of the tomb stands Jamat Khana, which was the assembly hall for disciples of Sheikh Salim and is latter on converted into tomb of the followers of Sheikh Salim Chishti. Outside this Jamat Khana is located a platform which contains the grave of other disciples of Sheikh Salim and is known as Yaran Chabutra. Behind this is located Zanana Rauza or Women's Tomb, which contains the graves of women of Sheikh Salim's family. This court also contains a small ablution tank. Outside this mosque near Buland Darwaja is located a Jhalra or step well and a birka or cistern which were the sources of water supply to the mosque. Near the tank a building called Langar Khana is also located where the food was distributed.

Jami Masjid or The Great Mosque

Jami masjid is the most sacred building in the Fatehpur Sikri town and hence it is located on the highest point of the ridge, over which the town is intended. It is one of the largest and most ornately finished mosques in the world. The magnificent Buland Darwaja and the splendid courtyard with elegant Tomb of sheikh Salim Chishti adorn this vastest mosque dependents. Since it is the principal mosque of the town, it is called Jami Mosque or the Friday mosque, which means congregational mosque.²

¹Rizvi, S,A,A, & Flynn, V,J, A, Fatehpur Sikri, Archaeological Survey of India, 1992, p.08

²Rizvi, S,A,A,& Flynn, V,J,A Fatehpur Sikri, Archaeological Survey of India, New Delhi, 1992, p. 59

General Plan

The quadrangle measures 109.68 m by 133.73 in dimensions. The main mosque is located on the western side of this quadrangle and the other three sides contains spacious arcuate cloister of 11.66m width divided into regular square bays. The Mosque itself, 288 ft. is crowned by three domes. In its courtyard which measures 359 ft. inches by 438 ft. 9 inches, stand two tombs.¹ These arcuate cloisters contain broad slanting chhajja supported on beautifully designed brackets and crowned with series of square chhatris above the parapet, which provides an elegant elevation to the building and is a unique example of harmonized culmination of pillars and chhatri composition. The southern cloister is pierced by the Buland Darwaja, while the eastern cloister contains Badshahi Darwaja. The inner courtyard contains Sheikh Salim's tomb, Islam khan's tomb and an ablution tank.

The main mosque is rectangular in plan and measures 87.82m by 19.81m in dimension and the main portal in the center is 28.38m high. The central nave is 12.05m sq. in area and is roofed by a single dome. The central nave is flanked by two colonnaded halls on either side containing two square chambers, which are 7.62m in dimension and are attached to the western wall. These smaller chambers are also crowned with dome. The main chamber Contains beautiful and ornately finished mihrab, which is 2.90m in width and 4.50m in height. The central mihrab is flanked by two smaller mihrabs, which are also beautifully ornamented. The smaller rooms on either side also contain mihrab.

Ornamentation

This lavishly decorated mosque marks the phase of transition in Islamic art, by using various indigenous architectural elements with efficacy. The façade composition of the building comprises of pillared dalan², with beautiful chhajja supporting on brackets and the simple and contains a central arch, which is framed with the panels containing geometrical contains fringes. The liwan is crowned with five chhatris, which adds to its elegant elevation⁴.

The central mihrab is most gorgeously ornamented with inlaid mosaic of stones and glazed tiles on the borders. It contains carved inscriptions, which are painted in blue and golden colour combination. The other mihrabs are also beautifully painted. The paintings are simply watercolor painting applied directly on stone surface. Dado panels also bears beautiful floral designs and are bordered with other patterns. The other two chambers are

¹Rizvi, S,A,A,& Flynn, V,J,A Fatehpur Sikri, Archaeological Survey of India, New Delhi, 1992, p. 59

²Fergusson, James, History of Indian and Eastern Architecture, Vol II, New Delhi, 1967.p. 295

³Roof type structure

⁴Havell, E.B, Indian Architecture, S. Chand and Co. New Delhi 1913, p. 164

crowned with kalash finials, but these domes do not play any role in organizing the skyline of the building. The most interesting beautifully designed corbelled pendentives. The walls and frieze of the mosque are carved with Persian and Arabic inscription containing quranic verses

Ablution Tank

This tank stands near the tomb of Sheikh Salim Chishti. It is a built up of red sand stone and is 8.68m s. in are and 1.22m deep. These kinds of tanks are essential in every Jami Mosque, as ablutions are required before prayer. This tank is connected to the other water sources through underground pipes¹.

Buland Darwaja

In June 1573, on his return to Sikri from the campaign and conquest of Gujarat, Akbar Renamed this city as Fatehpur and on this occasion, he might well have bespoken a more durable moment, of his victory by raising this great Darwaza². This monumental gateway is the integral part of the mosque, facing south. The Persian inscription on the eastern side of the main archway records that Akbar built this gateway to commemorate his conquest over Deccan in 1610 A.D. and hence it is south oriented (Facing Deccan). This gateway not only commemorates Akbar's conquest over Deccan but it also represents the greatness and grandeur of Akbar's empire³. The gateway stands majestically over the highest point of the ridge. The gateway is 40.84m high and is raised on a platform, which itself is 13.52m above the ground level, making the total heights of 53.63m, and hence it is the stupendous example of Islamic architecture in India⁴.

The gateway is semi-octagonal in plan, having an oblong central plane containing portal. The main archway is flanked by two smaller wings on either side, which are triple storied and contains arched openings. The central archway is framed in a broad band of yellow buff sand stone and bordered by red sand stone panels. At the bottom of the arch are two square panels on either side containing white marble inlay work enclosed by a triple band of the ornamentation and finally with other geometrical inlay work in white and black marble. This great arch is topped with stylized battlement, having small domes, the pattern surrounded by thirteen smaller domed kiosks. The magnificence of doorway is adorned with smaller turrets on all four sides. The interior of arch contains three actual openings of nearly equal dimensions and is 17.98m high. These three arches are also bordered with

¹Rizvi, S.A.A. & Flynn, V.J.A Fatehpur Sikri, Archaeological Survey of India, New Delhi, 1992, p. 59

²Fergusson, James, History of Indian and Eastern Architecture, Vol II, New Delhi, 1967.p. 295

³Nath, R, History of Mughal Architecture, P. 199

⁴Havell, E.B., Indian Architecture, S. Chand and Co. New Delhi 1913, p. 168

decorative panels. Each is superimposed by three other arched openings, over which rises a semi dome¹. It always manifest that to give a large building a door at all proportion to its dimensions was, to say the least of it, very inconvenient. Men are only 6ft. high, and they do not want portals through which elephants might march. To reduce the proportionate size of the portals, though it maybe they only opened the lower half, and they covered them, in almost all instances, with porticos to give them a dignity that even their dimensions failed to impart². Buland Darwaza has Chhatris on its top which reflects the Hindu ornamentation style and Philosophy of Akbar's secular architecture.

Badshahi Darwaja

The eastern gateway of the great mosque facing Agra is called Badshahi Darwaja; The Royal Door. The gateway is called so, because Akbar used it while coming from palace to join the congregational prayer.

The gateway is a part of mosque wall. It is projecting out of mosque wall in the form of a half hexagonal porch or main entrance. The gateway is 13.25m broad and 18.59m high having two kiosks and merlons at the top. The gateway is furnished with two arched opening one above the other. The outer face of the entrance is adorned with beautiful bands of buff and stone, containing geometrical designs in form of six-pointed star. The decoration is such that the height of gateway is reclined with lesser height of the principal arch. The small entrance arch in the interior is cusped and is adorned with lotus bud like ornamentation. This entrance arch leads to a hexagonal vestibule roofed by segmented shaped dome, over which is a flat roof. There is a gallery on the upper story of this vestibule, which can be accessed through a staircase provided at the side of the doorways. This vestibule is flanked by arched recesses on either side, which are topped by cusped arches³.

Tomb of Sheikh Salim Chishti

Tomb of Sheikh Salim Chishti is one of the finest examples of marble work in India. Infact there is no comparison of its lyrical and captivating beauty. It is situated in the quadrangle of Jami Masjid adjacent to the Zanana Rauza on the northern side, facing Buland Darwaja. Originally this was the place where Sheikh Salim Chishti carried out his religious austere life, therefore this site was the obvious choice for making his sepulcher. This mausoleum was completed in the year 1580-88¹

¹Havell, E,B, Indian Architecture, S Chand and Co. New Delhi 1913, p.168

²Fergusson, James, History of Indian and Eastern Architecture, Vol. II New Delhi, 1967, p.297

³Rizvi, S.A.A, & Flynn, V,J,A Fatehpur Sikri., p. 57

General Plan

This small but extremely beautiful building is square in plan measuring 14.36m by 14.63m in dimension, with an entrance porch attached to its southern side. It is raised on a plinth, which is 0.91m high. The portico is 3.42m by 3.04m in dimension and is also supported on the plinth. This porch is finished off in its three sides by a continuous flight of five steps. The main tomb is covered with beautiful marble screens. The main hall, which contains the grave of the saint, is 4.88m sq. in area and is roofed by a single semicircular dome supported on squinches having square base and octagonal drum². The grave is enclosed within a four-pillared enclosure, inlaid with mother of pearl. The tomb chamber on all side a spacious verandah, which is divided into three, bays by pillars and pilasters and is roofed by corbelled slabs, unlike most of the mosques and tombs, the tomb has no provision of ascending to the roof for maintaining the respect for the sanctity of the holy man buried within³.

Ornamentation

The building is so delicately and profusely craved that it appears like a carved ivory rather than chiseled marble. The plinth over which tomb stands is decorated with elegant mosaic of black and yellow marble with interlacing pentagons, stars and diamond shaped designs. The projecting porch is paved with white marble decorated with geometrical patterns and are bordered by black marble. The magnificence of the porch lies in its remarkable composition. These monolithic brackets are carved with delicate jalties containing minute geometrical and floral design, with a moulded pendant at lower end and a half chakra at upper end. The pillars from which these brackets emerge are carved with stylized peacock tail pattern. The verandah of the tomb is screened with monolithic intricate jalties containing exquisite geometrical pattern. The marble chhajja overhanging the screened verandah is also supported on serpentine brackets⁴.

The door, which leads to the main chamber, is also beautifully carved with arabesque and its architrave contains Quranic inscriptions. The interior bays are bordered with brown marble and contains Quranic verses carved in relief panels on a blue painted background⁵. The tomb chamber is also carved and painted in finely blended colours. The floor of the chamber is paved with white marble inlaid with stones of variegated colours. The

¹Rizvi, S.A.A, & Flynn, V,J,A Fatehpur Sikri.,p.64

²IRizvi, S.A.A, & Flynn, V,J,A Fatehpur Sikri p. 65

³Brown, Percy, Indian Architecture (Islamic Period) tarporvala, Mumbai, 1996, p. 106

⁴Nath, R, Madhya Kalin Bhartiya KalayanaurUnkaVikas, p . 60

⁵Nath R, History of Mughal Architecture, p. 199

cenotaph is of white marble and is covered by a cloth pall, usually green. Over the cenotaph rises a most remarkable and beautiful catafalque. It is a framework made of ebony, supported on four small and elaborately designed pillars and surrounded by a dome. Every part of this structure is covered with tiny scales of mother-of-pearl. The tomb has large number of Arabic inscription containing Quranic verses in the interior¹. The verses chosen to have deep esoteric meaning, and it will definitely hold the attention of those, who can read and decipher Arabic script.

Jamat Khana

On the eastern side of Salim Chishti tomb is located a beautiful red sand stone building enclosed by perforated screens and popularly known as Jamat Khana. As the name suggests the building was used as an assembly hall where the most distinguished disciples of Sheikh Salim Chishti use to pray and carried out their religious and devotional practices. All religious functions and gathering held in this hall were organized by Sheikh Haji Hussain. He was died in 1519 A.D. and was buried in the South west corner of the building. After that Jamat Khana was converted in to the tomb of Sheikh's followers. Presently there are 24 graves lies in this building. Most of them are without the name of the deceased though some carries quranic inscription. Men's gravestone contains a pen box or a turban and female's grave contain a flat board with a handle called Takhti².

This square building is raised on a platform, which is about 1 m high and paneled from all sides. The buildings measures 13.71m wide. in exterior dimensions and enclosed with an arcaded verandah which is 4.57m wide. The space in between is filled with beautiful carved red sand stone jalties. Each façade of the building contains seven bays. Beautifully carved brackets have been provided all around for supporting chhajja, sloping down from the building. The entrance door is in the middle of the central façade of the building and leads to a courtyard. The entrance door are 2.26m high and 1.65m wide and is beautifully finished with carved designs, containing crosses and circles etc. the verandah contains a central chamber, which is externally square and internally octagonal. This chamber contains grave of Islam Khan, grandson of sheikh Salim and governor of Bengal, who was also involved in the religious practices carried out in Jamat Khana, hence the tomb sometimes also called as tomb of Islam Khan. Since the grave is not inscribed, it is not confirmed that the grave is of Islam Khan. Each verandah of the building is divided into compartments by stone screened enclosures, which contains grave of other disciples of

¹Rizvi, S,A,A, & Flynn, V,J,AA, Fatehpur Sikri, p.65

²Rizvi, S,A,A, & Flynn, V,J,AA, Fatehpur Sikri, p. 66

Sheikh Salim Chishti. The roof of the building contains a central dome surrounded by 36 small domed kiosks which is a unique feature of this building¹. Outside of this tomb is located, on the eastern side of the badshahi darwaja is located a platform popularly known as Yaran Chabuttra of Friends Platform which contains the grave of other disciples of Shiekh Salim Chishti.

The Reception Rooms (Zanana Rauza)

ZananaRauza or women's tomb is a dark suite of room containing graves of women's of Sheikh Salim's family. The building is actually a part of northern cloister of the Jami Mosque. The northern wall of the building contains an underground doorway connected to Salim Chishi's house so that women of Sheikh Salim's family could visit him during his religious discourses. Later on, this building was converted into women's graveyard. At present there are two chambers. Stone screens, containing geometrical patterns, again subdivide the outer chamber. This chamber grave of Bibi Mattu Lanbiri and other uninscribed graves².

Zanana Rauza can be entered through an elegant gateway, standing between Sheikh Salim's tomb and Jamat Khana. The gateway contains beautiful bands of red sand stone and marble. The central arch contains a square opening bordered by inlaid panel of red sand stone and marble. Within this square opening there is an engrailed arch framed with beautiful floral design. The gateway is flanked by panels containing small arches and is surmounted with beautiful kiosks, turrets and merlons³.

The Birka (Cistern)

The Birka is like a small well located near the prayer chamber of Jami Mosque. This was a great rain water cistern and was constructed by walling up some vaults below the quadrangle, and provided with the flight of steps. Emperor Jehangir mentions in his memoirs that this cistern was built to conserve rain water, as there was scanty of normal water supply in Fatehpur Sikri, Jehangir called it birket which means reservoir or pond. This cistern was originally connected to the other water works through underground pipes. Presently this cistern collects rain water from Sheikh Salim's tomb and other adjacent building.

Conclusion

¹Rizvi, S,A,A, & Flynn, V,J,A Fatehpur Sikri, p. 66

²Rizvi, S,A,A, & Flynn, V,J,A Fatehpur Sikri, p. 67

³Rizvi, S,A,A, & Flynn, V,J,A Fatehpur Sikri, p.67

Fatehpur Sikri is called dream in Stones and it really was. What Akbar thought what he had conceptualized and whatever ideas came to his mind, he implemented those plans without any hesitation in his buildings. His thoughts are well reflected in the monuments at the sacred Jama mosque complex of Fatehpur Sikri. Process of absorption and assimilation reached at its zenith during his time. He incorporated Trebeate style in place of Muslim worship. Kiosks at the BulandDarwaza and brackets at Jami Masjid, reflects the mixture of two cultures and civilizations which are both opposite in their way of thinking and ideology. Thus, Fatehpur Sikri should be called city of emotions where all religions share one common ground and platform and Akbar was the person responsible for the National architecture of Fatehpur Sikri.

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BOS: Ground-Breaking Marketing Strategy in Indian FMCG Sector

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Abstract

The Series of policies declared by Indian government twenty years back imposes the challenges of intensified competition. The liberalisation policy opened a new era for global competitiveness for corporate on one hand and on other hand variety of products and services at competitive prices for customers. This results in decreasing profitable growth and companies are driven to compete primarily on cost. Companies in India today are competing in the global market place where cost arbitration alone is not sufficient to differentiate and sustain the business. It is time for companies to look into value innovation by adopting Blue Ocean Strategy. The BOS or Blue Ocean Strategy is a business strategy about capturing uncontested market space, thereby making competition irrelevant. The fundamental basis of BOS is 'Value Innovation'. A blue ocean is created when a company achieves value innovation that creates value simultaneously for both the buyer and the company. The innovation in product or service must raise and create value for the market, while simultaneously reducing features or services that are less valued by the current or future market. The 'ocean' in this paper refers to the market or industry. In India FMCG sector is growing at a very faster rate but the companies in this sector are facing most global competitions. In this paper an analysis has been made to highlight importance of blue ocean strategy over other common marketing strategies through various cases and efforts are made to prove BOS is necessity for Indian FMCG sector.

Key Words: Value Innovation, Brand Value, Red Ocean, BOS, etc.

Introduction

Marketing Strategy is something that helps companies achieves Marketing objectives. Marketing objectives help achieve corporate objectives and corporate objectives aim to achieve a competitive advantage over rival organisations. “Strategy without tactics is the slowest route to victory; tactics without strategy is the noise before defeat” Sun Tzu - The Art of War. Globalisation is the new jargon that has come to dominate the world since the nineties of the last century with the end of the cold war and the break-up of the former Soviet Union and the global trend towards the rolling ball. The frontiers of the state with increased reliance on the market economy and renewed faith in the private capital and

resources, a process of structural adjustment spurred by the studies and influences of the World Bank and other International organisations have started in many of the developing countries. Greater access to developed country markets and technology transfer hold out promise improved productivity and higher living standard.

The Indian economy before the announcement of new liberalisation policy was under the regime of licence raaj and the critics to new policy were collectively agreed upon the success of this step of that time congress government but soon the same group of critics were overwhelmed by the unprecedented growth of the economy. The sector that showed distinguishing growth was FMCG industry. At the time of lifting licence system and establishing policy of open economy; it was widely expected that the emergence of global FMCG giants with their expertise, international brands and experience of competing in the world markets would be lethal for blossoming Indian FMCG industry.

But the Indian FMCG players seem determined on proving all these conjecture wrong. For twenty years they held on even as the major markets were taken over by the likes of P&G and Coca-cola. They took the time to understand the dynamics of competition in this new era and changed their strategies and processes to be more relevant to the Indian consumer and now they seem to be alert on taking back their lost terrain. From processed foods to milk products to soaps the Indian players seem to be on a recuperate stroll. Blue Ocean strategies are most appropriate for companies in the mature/decline phase of the product life cycle that are suffering from declining revenues and decreasing customer loyalty. Organizations facing these pressures typically attempt to increase the bottom line by increasing marketing and branding efforts while cutting costs and trying to dodge price wars. These value renovations usually meet with little success as competitors are attempting the same moves in what is largely a zero sum game. Instead of focusing on besting rivals firms should aim for value innovation by redefining their offerings to compete in niches where there is no competition. Applying value creation logics helps managers redefine their offerings. This is the paper to outline how combining value creation logics leads to discovering Blue Oceans.

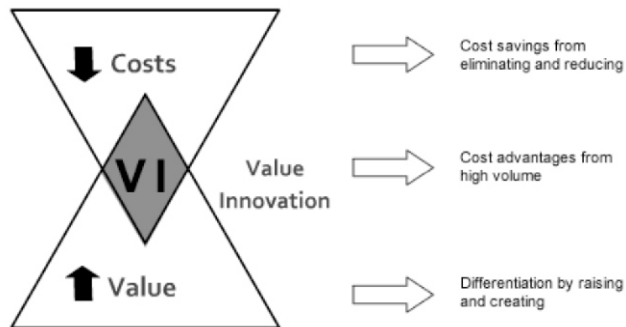
What is Blue Ocean?

BOS is aimed to create uncontested market space and make the competition irrelevant. Companies have long engaged in head-to-head competition for sustained, profitable growth. In today's overcrowded industries, competing head-on results in a bloody 'red ocean' of rivals fighting over a shrinking profit pool and is unlikely to create profitable growth in future, tomorrow's winners will succeed by creating 'blue ocean' for growth.

In short Blue Ocean is to:

- Make the competition irrelevant
- Create and capture new demand
- Break the value-cost trade-off
- Align the whole system of a firm's activities with its strategic choice of differentiation and low cost.

The theme of Blue Ocean Strategy is 'Value Innovation'. A blue ocean is created when a company achieves value innovation that creates value simultaneously for both the buyer and the company. The innovation (in product, service, or delivery) must raise and create value for the market, while simultaneously reducing or eliminating features or services that are less valued by the current or future market.



Value innovation is a strategic move that allows a company to create a blue ocean. It is about the simultaneous pursuit of differentiation and low cost, it is value innovation because instead of focusing on beating the competition, value innovators focus on making the competition irrelevant by creating a leap in value for buyers and the company, thereby opening up new and uncontested market space. A company achieves value innovation by aligning there: value proposition (utility minus price) by creating an offer that dramatically raises buyer utility at the right price for the mass of the target buyers; profit proposition (price minus cost) by making a tidy profits and creating a leap in value for the company itself; people proposition by practicing tipping point leadership and fair process and by building execution into strategy formulation.

Need of blue ocean strategy

The blue ocean strategy is very relevant to the market and economic situations of India. When it comes to FMCG in particular, markets in India is highly competitive, where

largely undifferentiated products are sold in large quantities and at low cost. On the other hand, after decades of miraculous and solid growth, living standards have improved in past couple of decade substantially and people there are paying more and more attention to factors such as quality of life, health and environmental safety, to name a few. The challenge here is how companies can go beyond a pure low-cost strategy to address those unmet needs at a price accessible to the mass of target buyers in developing economies like India.

Application of Blue Ocean Strategy in Indian FMCG sector

There is stiff Competition in the FMCG sector in India and the competition is expected to increase in the coming years. FMCG sector in India is most likely to witness more than 50% growth in the semi-urban and rural areas in India by the year 2010 according to the reports of the Associated Chambers of Commerce and Industry of India (Assocham) of July 2005. The sector is estimated to grow by 10% per year and reach a market size of Rs 100,000 crores by 2010 from Rs 48,000 crores in 2005.

The people of both rural and urban regions in India are consuming high volume of fast moving consumer goods these days due to the higher disposable income. This has led to a surge in the setting up of a number of FMCG companies in India to meet the rising demand of the consumers. The rural market has grown significantly over the years. The FMCG companies which have grown significantly in India in the last few years are Nirma, HUL, Dabur, ITC, Godrej, Britannia, Coca-Cola, and Pepsi.

The accent of marketing plans dominant any other decision that can be taken in the state of marketing strategies. A marketing plan is essential to grab the market segment before any other player captures the market. What are the target groups? Which segment of the market presents higher revenue generating opportunities? These are some of the questions that marketing teams ponder over, in the pursuit of achieving a good plan. A marketing strategy allows you to create tactics better than those of your competition. You will be able to develop your own innovative techniques that give you an edge over your competitors who may have been in the market longer than you have and have not revised their marketing strategy to fit the current changes in the market.

Blue Ocean as a strategy has been in practice for some time now. Looking at uncharted markets and how to fuel the next level of growth is the cornerstone of the strategy. But the new decade has brought its own challenges and the scenario is different from the one at the beginning of the new millennium.

Blue Ocean Strategy is a business strategy book first published in 2005 and written by W. Chan Kim and Renée Mauborgne of The Blue Ocean Strategy Institute at INSEAD. The book illustrates what the authors believe is the high growth and profits an organization can generate by creating new demand in an uncontested market space, or a 'Blue Ocean', than by competing head-to-head with other suppliers for known customers in an existing industry.

Blue oceans, in contrast, denote all the industries not in existence today—the unknown market space, untainted by competition. In blue oceans, demand is created rather than fought over. There is ample opportunity for growth that is both profitable and rapid. In blue oceans, competition is irrelevant because the rules of the game are waiting to be set. Blue Ocean is an analogy to describe the wider, deeper potential of market space that is not yet explored

Competition in the FMCG Sector in India

India's huge population has always been a significant factor for the growth of FMCG sector in the country. Between 1950 and 1980, the consumption of FMCG products were relatively low due to the low per capita income. The post-liberalization era in India has witnessed a massive growth in the selling of products in the domestic market. The Indian market also imported loads of products from overseas markets which made increased the competition between the organized and the unorganized sector

The easing of the trade barriers encouraged the MNCs to invest in the Indian market to cater to the needs of the consumers. The living standards rose in the urban sector due to high disposable income along with the rise in the purchasing power of the rural families which increased the sales volume of various manufacturers of the FMCG products in India. The large-scale companies such as HUL, Godrej Consumer, Marico, Henkel, Reckitt Benckiser and Colgate have targeted the rural consumers and have also expanded their retail chain in the mid-sized towns and villages. On the contrary to this, Nestle has always targeted the market of urban India and focuses largely upon the value added products for the elite class or upper middle class population.

Players like Marico have successfully utilised the blue ocean strategy to establish a first mover advantage in fields like skin care via the Kaya skin clinics while Godrej has successfully leveraged its brand name and distribution strength to play itself into a position of strength in the rural market for soaps. One thing in common seems to be a new found understanding of the Indian consumer. The Indian companies are putting great emphasis

on understanding the needs of the Indian consumers and tailoring their products to those needs. Like McDonalds' has started to offer its burger in Indian flavor, Pizza Hut in India is offering its pizzas in Punjabi aroma. This has helped some of them to discover nook in the market that have been untapped by the MNCs and have helped them to avoid competition. For example Emami's ayurvedic formulations for its products like Fair and Handsome have helped to stand out in the marketplace and differentiate itself.

If the avoidance of completion by finding new differentiation strategies seems to be the forte of some of the players others like GCPL and Dabur are competing with the global majors head-on. Dabur particularly is in a difficult industry with its oral care products with the market leader i.e. Colgate commanding a huge market share of 53 percent compared to Dabur's 13 percent. It has managed to capture a significant percentage of the fast growing rural market by basing its positioning on herbal strategy.

These are exciting times in the FMCG industry. The Indian players seem to have stolen a march over their bigger rivals with their unique understanding of the Indian consumer and different positioning but it will not be long before the bigger players react to this challenge. The next four years can prove to be a trial by fire for these Indian majors as they fight to sustain the gains they have made and capture markets that have been fortresses of the multinationals.

Application of BOS in Marico Industries

The uncommon sense that Marico industries believes in, has brought about radical results for the company. The Company enjoys leadership positions in most of the markets it is present in- viz. Coconut Oil, Hair Oils, Anti-lice Treatment, Premium Refined Edible Oils, Fabric Care etc.

Be it the convenient packaging for Parachute from the erstwhile tin cans of coconut oil, the introduction of heart care with Saffola in the edible oil market, or the starching process branded and eased by Revive, Marico's innovation has helped it be the pioneer, stay consumer centric and sustain a firm hold in the market space.

With Parachute and Nihar, Marico holds more than 50% market share in the branded hair oil segment. It enjoys over 21% share of the 3000 crore hair oil segment (composed of coconut hair oil, amla, light, cooling and tonics and gels). In the coconut oil market, Parachute itself controls about 50% share of the market.

In the coconut hair oil market they have capitalised on the fact that consumers test quality based on the oil's aroma. From showing the concept of handpicking coconuts from Kerala,

to their 'gorgeous hamesha' concept of celebrating womanhood, the brand has taken numerous leaps. The innovative packaging helps the brand address changing consumer needs.

In the premium refined edible oil market, Marico's Saffola faces fierce competition from Sundrop in terms of volume, with the former holding close to 50% share. Saffola's message has been clear. By showcasing mild fear, its commercials aim to introduce heart care through the edible oil. Its approach is preventive. The 'kal se' campaign brought a quantum leap in sales while the 'thief' advertisement, and 'dil ka haal' reinforced the same idea to slightly varying targets- ranging from heart patients to the 30 year old man, who is likely to face heart problems with the kind of lifestyle he is leading. The 'Prayaschit' (repent) advertisement (guilt after indulgence in food) directly targets the housewife who is, most often, the buyer in this case.

Having established Saffola as a healthcare product, Marico continues to leverage its positioning into segments like packaged wheat flour, rice, and breakfast cereals with a strong health quotient.

The spirit of innovation coupled with the 'uncommon sense' in Marico is evident in its unique product designs. This covers the product idea, the packaging as well as the product delivery. Innovation and uniqueness encompasses Saffola's range of functional foods, Parachute Therapie (hair fall reduction through hair oil), their Kaya product range, Parachute Advanced Night Repair Crème, a bottle heater for Parachute Hot Champi, Parachute massager for the working woman.

Application of BOS in Godrej Consumer Product Limited

GCPL's efficient penetration of the Indian Market, especially the rural consumer base deserves special mention. Hair dyes and Hennas which were once considered luxuries in rural households are everyday products now. And GCPL has been instrumental in bringing about this metamorphosis through its ambitious rural expansion project Dharti, which was launched in early 2009. Beefing up an enviable distribution network that spans 50,000 plus villages and 8000 small towns, the company has ensured that almost half its revenues come from the rural areas of the country.

GCPL is second only to Hindustan Unilever (HUL) in manufacturing bath soaps. Its Godrej No:1 brand is the best selling soap in the Grade-1 category. Apart from this, its impressive array of Brands also include Cinthol and a host of exciting Hair care products. The Core competency of Godrej has been its ability to successfully create, communicate

and deliver a portfolio of value brands to the huge segment of cost conscious customers. Even in times of recession the company decided not to raise prices and successfully managed rising commodity prices through efficient cost management and squeezing out efficiencies from its supply chain. It tailored the size of the offering and not the product as such, and introduced them at price points that the customers could afford.

GCPL innovated and customized its Communication and promotional strategies in accordance with its goal. Shunning satellite channels, GCPL decided to promote its offerings on Doordarshan, All India Radio, local publications and regional TV channels. For its hair colour products with 'Orange Aunti' advertisement, GCPL depended more on word of mouth publicity. It engaged around 50,000 barbers spread across 9 states in a Co-branding exercise. GCPL provided them with grooming kits in exchange for prominent display of its logos in the saloons. Since most people turn to their hair dresser for advice, it made perfect sense to influence the influencer.

Application of BOS in Wipro Consumer Care and Lighting

Wipro Consumer Care and Lighting (WCCLG), a business unit of Wipro Limited, started with vegetable oil production in 1947 and has since then come a long way and established a profitable presence in the branded retail market. With a vast variety of products spanning soaps, baby care products, health and wellness, Wipro's products have bettered the lives of millions of consumers across India and global markets. It has been one of the fastest growing FMCG companies, both organically and through acquisitions.

They have just announced sales revenue of Rs 6410 million, which is 9% of the total revenues of Wipro Ltd. They reported an EBIT of Rs 807 million for the quarter ending 31st March 2010, which was an increase of 16% compared to the previous year's same quarter. In addition to these impressive facts, WCCL plans to invest Rs. 800 million to augment its production capacity for products such as Glucovita, CFL's, toilet soap etc. What is WCCL doing right that they are coming off age in a splendid manner and standing their own against the much bigger and well entrenched FMCG companies.

The company is also planning to expand its skincare range under its flagship brand Santoor. Recently Santoor has launched another brand extension - Santoor Deodorant. Now WCCL already markets deodorants, soaps and talcum powder under the brand value. What we can see is that Santoor is gradually becoming a personal care brand rather than just being limited to a soap brand. This 600+ crore brand was on a roll last year becoming one of the largest selling soap brands in India. It uses only modern trade channels to market

its skincare range. Also their glucose powder Glucovita and artificial sweetener Sweet 'n' Healthy were rolled out nationally post a test-marketing phase.

The company has introduced a new product 'Safewash', a mild detergent for all type of fabrics is also popularized rapidly because it is gentle to hands, very cheap in cost, mild fragrance and 1+1 free offer, all these features made this unique product made its demand high and top among the same range of competitors.

Recently WCCL has launched LED rechargeable lanterns in 3 configurations namely, Solar, Rechargeable and Dry cell. The low power consumption of LED ensures that they give a backup of up to 25 hours. They would be initially launched in south India, U.P and Punjab.

Application of BOS in Dabur India Limited

Dabur India Limited is the fourth largest FMCG (fast moving consumer goods) company operating in India with a turnover of 5,322.9 million rupees as at 30 September 2008. It operates under three business categories namely the consumer care division, consumer health care division and Dabur Foods Limited (in July 2007, Dabur announced the demerger of Dabur Foods Limited with DIL). The company's products are based on traditional medicine - 'ayurveda'. Dabur's flagship brand Real fruit juice was launched in 1996 and the brand carved out a niche for itself amid mainstream players like Coca-Cola, Pepsi, Godrej, and Parle Agro by claiming to be the only fruit juice in packaged form that is 100% preservative free. Since 2005, there has been an increasing health consciousness among consumers for foods and beverages. Sensing this opportunity, Dabur repositioned its Real Activ as a health drink instead of fruit juice. This repositioning also meant that Real Activ would stop being a mass juice brand and cater to a niche market that accepts a premium health drink. The case deals with the dilemma as to whether the repositioning would help Dabur shed its mass marketing tag. The case also highlights the sustenance of repositioning Real Activ in the long run.

Application of BOS in Pizza Hut

Pizza Hut is one of the flagship brands of Yum! Brands, Inc., which also has KFC, Taco Bell, A&W and Long John Silver's under its umbrella. Pizza Hut is the world's largest pizza chain with over 12,500 restaurants across 91 countries.

In India, Pizza Hut has 140 restaurants across 34 cities, including Delhi, Mumbai, Bangalore, Chennai, Kolkata, Hyderabad, Pune, and Chandigarh amongst others. Yum! is in the process of opening Pizza Hut restaurants at many more locations to service a larger

customer base across the country. Operating in India Pizza Hut has given test of Indian Curry to its pizzas. Now almost all Indian cuisines tests are available in pizzas at very affordable rates and with assured very hot delivery.

Application of BOS in Future Group (Big Bazaar)

Big Bazaar is a chain of [hypermarket](#) in India. Currently there are 214 stores across 90 cities and towns in India. Big Bazaar is designed as an agglomeration of bazaars or Indian markets with clusters offering a wide range of merchandise including fashion and apparels, food products, general merchandise, furniture, electronics, books, fast food and leisure and entertainment sections.

Big Bazaar is part of [Future Group](#), which also owns the [Central Hypermarket](#), Brand Factory, Pantaloons, eZONE, HomeTown, KB's Fair Price to name a few and is owned through a wholly owned subsidiary of [Pantaloon Retail India](#) Limited

Big Bazaar was launched in September, 2001 with the opening of its first four stores in [Calcutta](#), [Indore](#), [Bangalore](#) and [Hyderabad](#) in 22 days. Within a span of ten years, there are now 152 Big Bazaar stores in 90 cities and towns across India.

Big Bazaar was started by [Kishore Biyani](#), the Group CEO and Managing Director of Pantaloon Retail.

According to [Kishore Biyani](#)'s Change and Confidence among the entire population is leading to rise in Consumption, through better employment and income which in turn is creating value to the agricultural products across the country. Big Bazaar has divided India into three segments:

India one: Consuming class which includes upper middle and lower middle class (14% of India's population).

India two: Serving class which includes people like drivers, household helps, office peons, liftmen, washermen, etc. (55% of India's population) and

India three: Struggling class (remaining 31% of India's population).

While Big Bazaar is targeted at the population across India one and India two segments, Aadhaar Wholesale is aimed at reaching the population in India three segment. With this, [Future Group](#) emerged as a retail destination for consumers across all classes in the Indian society.

Wednesday Bazaar

Big Bazaar introduced the Wednesday Bazaar concept and promoted it as 'Hafta Ka Sabse

Sasta Din'. It was mainly to draw customers to the stores on Wednesdays, when least number of customers are observed. According to the chain, the aim of the concept is 'to give homemakers the power to save the most and even the stores in the city don a fresh look to make customers feel that it is their day'.

With a desire to achieve sales of Rs 26 Crore in a one single day, Big Bazaar introduced the concept of 'Sabse Sasta Din'. The idea was to simply create a day in a year that truly belonged to Big Bazaar. This was launched on January 26, 2006 and the result was exceptional that police had to come in to control the mammoth crowd. The concept was such a huge hit that the offer was increased from one day to three days in 2009 (24 to 26 Jan) and to five days in 2011 (22-26 Jan).

'Maha Bachat' was started off in 2006 as a single day campaign with attractive promotional offers across all Big Bazaar stores. Over the years it has grown into a 6 days biannual campaign. It has attractive offers in all its value formats such as Big Bazaar, Food Bazaar, Electronic Bazaar and Furniture Bazaar - catering to the entire needs of a consumer.

On February 12, 2009 Big Bazaar launched 'The Great Exchange Offer', through which the customers can exchange their old goods in for Big Bazaar coupons. Later, consumers can redeem these coupons for brand new goods across the nation.

Historically, the home video market in India has been highly fragmented. Before 2007, no single company had been able to capture a significant share as none had the distribution capability or a large content base in multiple languages. Also, rampant piracy was eating into the market share of brands.

Application of BOS in Moser Baer

The 'legal' players used to price home VCD/DVDs at a large premium and stress the quality difference compared to pirated videos. Though this created a profitable channel, home viewing formed a much smaller share of film industry revenues than it did in markets like the US. With many small players competing and using essentially the same strategy, the opportunity to use innovation for breaking out of the pack was potentially very large. But it takes courage to challenge the dominant orthodoxies and not every company is willing to contradict the prevailing wisdom.

Moser Baer, which is today the world's second largest producer of blank optical disks, was willing to do so. "With the entertainment business, we charted out a strategy which had really not been followed anywhere," says Ratul Puri, Executive Director, Moser Baer, adding: "Later, someone was explaining the term Blue Ocean strategy to me, and I realised

that is exactly what the entertainment division is" Delhi-based Moser Baer had invested heavily in manufacturing capabilities to get huge economies of scale.

But it was worried that the limited technology life cycle of the disks would make its capacity obsolete and redundant. Moser Baer was also conscious of its low brand equity, as it dealt with a commoditised product: Blank CD/DVDs.

Technology, which Moser Baer understood well, enabled it to break the mould in the home video space. Before Moser Baer entered the market, there were essentially two price points for each VCD/DVD—the legitimate content came in disks priced at Rs 300-500 each, and the pirated stuff was available at Rs 30-40 per disk.

Moser Baer solved this price-or-quality puzzle to produce high-quality VCDs/DVDs at prices up to 80 per cent less than those charged by established players. Consumers always want a quality product, but Indian consumers want a quality product at a very low price. For Moser Baer, low prices meant high volumes—and a stronger business case. Moser Baer's strategy completely changed the industry from a high-margin, low-volume one to a low margin, high-volume one. The company could effectively challenge the pirates and change the basis of the competition.

Conclusion

The consumers today are endowed with a wide range of options to make their pick in FMCG products. There is a lot of competition in the FMCG sector as a number of factors are to be considered while selling the products. This precisely denotes that only the innovators can survive this tough competition. The investors must be very proactive to the market needs and also build strong and powerful distribution channels

Creating blue oceans is not a static achievement but a dynamic process. Once a company creates a blue ocean and its powerful performance consequences are known, sooner or later imitators appear on the horizon. However, a blue ocean strategy brings with it considerable barriers to imitation. Some of these are cognitive, and others are operational.

The first barrier is often cognitive. Competitors are often blocked from imitating because of brand image conflicts, or the blue ocean strategy just does not fit conventional strategic logic. The second barrier is organizational. Because imitation often requires companies to make substantial changes to their existing business practices, politics often kick in, delaying for years a company's commitment to imitate a blue ocean strategy. The third level includes the economic forces of blue oceans. The high volume generated by a value

innovation leads to rapid cost advantages, placing potential imitators at an ongoing cost disadvantage.

By heightening these barriers to imitation, companies can defend the blue oceans they created for some time. However, it should be noted that creating a blue ocean is not a static strategy process, but a dynamic one.

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Impact of Happiness in Human Beings: Know Life, Know Happiness

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Abstract

The time-based association between our cognizance aims to act and the action itself has been widely explored. As research has shown that utmost behavior is touched by the emotional state people are in, it is extraordinary that the role of emotional states on intention consciousness has never been examined. Here, in this paper an effort has been made to test how positive and negative effects have opposite effects on the chronological association between the conscious intention to act and the act itself. Introduction to pleasing things, as compared to experience to unkind things, enhanced optimistic affect and reduced negative affect. This paper suggests that the chronological relationship between the mindful aim to act and the action itself is flexible to sentimental states and can specify that optimistic affect increases intentional consciousness which finally leads to happy life.

Keywords: Happiness, well-being, major life events, etc.

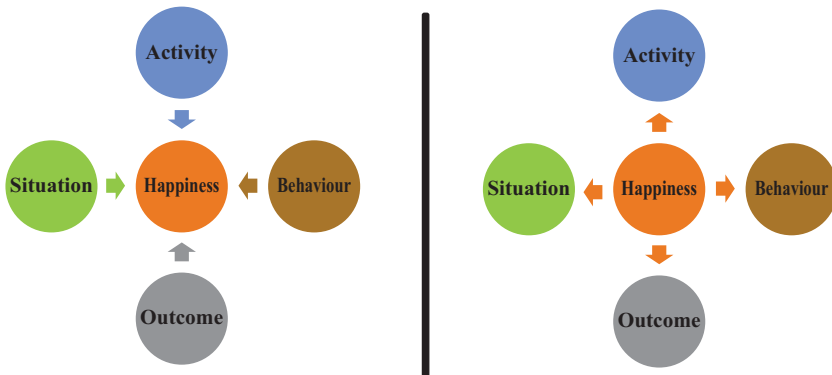
Introduction

“Goutam Budhha Has Left His Palace in the Search of Peace and we are all searching palace in the cost of Peace” by this beautiful sentence Happiness is the ultimate goal of life which is actual realization of life and pursuing happiness in this planet every human creature wants happiness, Peace at the end of day.

Understanding life is crucial in achieving happiness. There are different views regarding life leading us in different directions. Life is often compared with rivers by many philosophers since ages. River as a source does not get affected; whether you quench your thirst or drown yourself in it. It is up to you how you utilize your source. Similarly, what you gain out of your life – happiness, joy, sorrow, anger or resentment largely depends on how you have lived it. If you have sown the seeds of happiness that is the only outcome you should expect and will receive. Along these thoughts, if you visualize life in the wider canvas, you will realize that what you are today is the work of millions of years of evolution.

You were not what you are now and you would not be what you are now. You are constantly changing like the twists and turns in the river, leading yourself towards ultimate

destination, happiness. At the end of day suppose you have achieved everything in your life but no smile on your face it means you have not touched life by the concept understood by the following diagram of Happiness.



In Conversation with 'You'

We are all born eternally happy, in fact the entire creation emanates from the act of happiness. If there was no happiness, there will not be any living human being. The entire human race will come to stand-still and extinguish if there is no happiness. Happiness is the life force which keeps entire world in order.

Since we are born eternally happy all that we need to do, to be happy, is to learn to be our own selves. We have to take the responsibility of the state of happiness we are in. For we are as happy or as unhappy as we have through our thoughts in the past, chosen to be. There lies the seed, the opportunity, the hope. If we are as happy as we have chosen ourselves to be, we can also be as happy in the future as we choose to be.

How to Achieve Happiness

Spirituality: Most of us are accustomed to looking outside of this world to ourselves for fulfillment of life. We are living in a kind of world that conditions us to believe that outer attainments can give us what we want in our life. We realize Yet again and again our experiences that nothing can give us permanent happiness. Most of the time, however, we find ourselves striving toward that which always seems to lie just beyond our reach. We are caught up in doing rather than being, in action rather than awareness.

Meditation: This is complete journey of breath. Journey of external to Internal. Dive into a deep ocean of love and meditation. Meditation practice always clear the vision of every

human being in this world. Meditation is complete breathing science. If you know your breathe, you will know how to live life in better way.

Healthy Food: Healthy food green food, Vegetables fruits are all the sources of energy:

Healthy Living Style: Wake up early morning is the best therapy to do something in our life. How to live better way and best utilize of whole day and early going in bed is the best way of healthy living Style

Service: To do something in best way and service(sewa) to the society is the best way of living and serve the god.

Music: Music is part of deep Meditation just celebrate it.

Money: The role of Money in Happiness project is almost 40%. It is very essential to celebrate and full fill the basic needs of every individual.

Celebration: Whatever achievements just celebrate on that moment that is most important. Celebration is also one kind of important factor

Positive Friendship and Environment: Good friends are like important assets of our life so keep it up like water and breathe.

Relationship: Love and respect both are very essential factors of Relationship. Love is one of the most profound emotions known to human beings. There are many kinds of love, but most people seek its expression in a romantic relationship with a compatible wife or friend for some, romantic relationships are the most meaningful element in their lives and provides a source of deep fulfillment.

Yoga/Exercise: Recent research has shown that a one-week mindfulness meditation class can lead to structural brain changes including increased grey-matter density in the hippocampus, known to be important for learning and memory, and in structures associated with self-awareness, compassion and introspection.

Be responsible: Take possession of whatever is the state of your present level of happiness, own it, pay gratitude to it. If you are unhappy, your own faults are showing you the way to be happy. Pay gratitude to your own thoughts. If you are less happy that is also fine. Pay gratitude to good thoughts that at least brought you back in balance. Starve the bad thoughts. If you are happy, pay gratitude to thoughts, energize them further, cultivate new thoughts. Starve and eliminate the thoughts that do not make you happier.

Think Positive - When you enliven your thoughts on what makes you happy, you automatically become magnets to the thoughts that you desire. Whatever we see around us

is born twice. Once at the thought level and second at the physical level. If we have started thinking, the physical level is but an exact manifestation of our thoughts. That is why it is again and again said, we are as happy as we ourselves choose to be. There is enough abundance or enough of everything in the world that can make us happy, but how happy we want to be is a choice which we all have to make ourselves. The fuel to the choice are the thoughts and the feelings.

Conclusion

Happiness is the Ultimate Goal of Life and gift of life Health, Money, Celebration, Food Playing Vital Role in our life. Happy people live elongated, perhaps because contentment defends physical health. If so, Happiness can be progressive in numerous ways: At the individual level happiness can be promoted by means of (1) providing evidence about consequences of life-choices on pleasure, (2) working out in art-of-living aids, and (3) specialized life-counseling. At the level of society greater happiness for a superior quantity can be achieved by procedures that aim at a sophisticated physical standard of living, the nurturing of liberty and equality and good governance.

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Legal control of cyber crimes against E-banking in India

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Abstract

Banking is the oldest form of trade and business in the world and has its survival from ancient times in India. Since 1980, the economic and financial sector reforms were introduced in India. Banking industry has gone through significant changes in recent past. Almost all the banks in India have adopted Information Technology solutions for rendering the banking services to their customers by using the IT tools and techniques to fulfill the needs of the customers. In the age of information technology, the swift expansion of, telecommunications, computers and other technologies have led to new forms of worldwide crimes known as 'Cybercrimes'. Cybercrimes have practically no boundaries and may affect every country in the world. Mounting Cybercrimes across the world is a very severe warning in the up-coming time and produces one of the most complicated challenges before the law enforcement machinery. This paper highlights the impact of Cyber Security Laws on E-Banking.

Keywords: Cyber Security Laws, E-Banking, IT Law, etc.

Introduction

With the spread of internet technology, a new threat has been established and felt all over the world i.e. a new way and uncontrollable mess of information technology or digital crimes, especially with e-banking. The transformation in committing crimes with the help of information technology; the law should not be a mute spectator but to transform itself according to the changing environment. There was a need to redefine the old laws in the changing environment. Most of the existing laws in India are either created by the British Government or enacted after the independence within the first three decades and based on physical environment, geographical boundaries, tangible documents and records.

To curb and control the crimes arising out of the Internet and Computer Technology, in the year 2000, the fundamental law for electronic transactions in India has come forward in the form of the Information Technology Act, 2000. The IT Act 2000 was amended in the year 2008. The reason for amendment of IT Act 2000 was certain lacunas and shortcoming in it. The IT Act 2000 provides the legal infrastructure for Information Technology in India in

general and Banking and Financial Institutions in particular. The Information Technology Act, 2000 and the Information Technology Amendment Act 2008 provide the safeguard against the cyber crimes up to certain extent but does not provide the absolute protection and does not cover all the aspects of Information Technology. A careful analysis of the IT Act 2000 and IT (Amendment) Act 2008 reveals that the new amendments of the IT Act 2000 are not at all sufficient in the context of growing needs of India and have various noticeable loopholes in it. Therefore the miscreants are getting the benefit due to prominent shortcomings in the law.

As the users of E-banking are growing and the range of online interaction expanding, cyber crime incidents of fraud in the Commercial Banks in India are enormously increasing. The present research work is the critical study of how badly Indian e-banking is affected by cyber-crime and to test whether the newly enacted laws will help in preventing and prosecuting the cyber crimes. This study is an effort to find out whether IT Act, 2000 and IT Amendment Act, 2008 is effective and efficient enough for controlling the recent developments in cyber crimes against e-banking in India. It is also an attempt to expose up to what extent does the other law (new and old) in India having legal control over cyber crime against e-banking in India.

The cyber-crime has the global impact and it affects the people of every nook and corner of the world. Nobody will deny that there is an urgent need to bring changes in the Information Technology Act to make it more effective to combat with cyber-crime. The researcher hope that the suggestions may throw light on the insufficiency of legal regulations and remedy available thereof for e-banking in India. Researcher have suggested where the full proof amendments in legal provisions are required to facilitate legal control of cyber crimes against e-banking in India.

E-Banking

Banking industry has gone through major changes in recent past. Almost all the banks in India have adopted Information Technology solutions for rendering the banking services to their customers by using the IT tools and techniques to fulfill the needs of the customers. Due to the dawn of e-banking, conventional banking has been disappeared from the Indian banking scenario and banks have shifted from traditional banking to Core Banking Solution. Under these circumstances Indian banking industry is facing the challenges of impact of technology on the banking. In the age of information technology, the swift expansion of, telecommunications, computers and other technologies have been lead to the new forms of crimes known as 'Cybercrimes'. Cybercrime doesn't know the physical

boundaries and may affect every country in the world.

The transformation in committing crimes with the help of information technology; the law should not be a mute spectator but to transform itself according to the changing environment. There was a need to redefine the old laws in the changing environment. Most of the existing laws in India are either created by the British Government or enacted after the independence within the first three decades and based on physical environment, geographical boundaries, tangible documents and records.

In the digital era, everything is recorded in digits, irrespective of any physical boundaries. Due to these consequences there is a need of strict statutory laws to regulate the criminal activities in the cyber world and to protect technological advancement system. Under these circumstances, E-Commerce Act, 1998 was enacted. After two years of passing of this law, Indian parliament passed “Information Technology Act, 2000” on 17th Oct 2000 to have its exhaustive law to deal with the technology in the field of e-commerce, e-governance, e-banking as well as penalties and punishments in the field of cyber crimes¹.

Information Technology Law

The main purpose of enactment of IT Act 2000 was to reprimand various cyber crimes and to provide strict and harsh punishments. For establishment of Sound Cyber Law Regime various new rulings were either enacted or old provisions were amended. The Information Technology Act was amended in the year 2008. In the series of the amendment of old statute, The IT Act amended some of the provisions of the Indian Penal Code, 1860; the Indian Evidence Act, 1872; the Bankers Book Evidence Act, 1891 and the Reserve Bank of India Act, 1934.

With the development of secured electronic transaction technologies more banks have joined the stream to use E- banking both as a transactional as well as an informational medium. As a result, registered Internet banking users can now perform common banking transactions. As the users of E-banking are growing and the range of online interaction expanding, there is expansion in the cyber crimes. Though, Information and Technology Act, 2000 is in existence, but with a lot of loopholes. This Act includes law defining and prescribing punishment for cyber- crimes, but this maiden Act has its own limitation. The worst part in IT Act, 2000 with regard to E-Banking is that this act is not applicable to entire Negotiable Instrument Act while the entire banking revolves more or less around negotiable instruments only. The Negotiable Instrument Act was amended in 2002 in

¹Article Cyber Crimes and the Law

respect of cheques in electronic form and truncated cheques; The Information Technology Act 2000 is not encouraging while dealing with the cyber crimes. There are so many discrepancies in the IT Act, 2000 while dealing with the various cyber crimes like copyright, trade mark or patent of electronic information and data. Indian banking industry is facing the problem of growing cyber crime incidents in spite of the Information Technology Act, 2000 and IT Amendment Act, 2008 along with other amended traditional laws like IPC, CRPC, CPC Bankers Book Evidence Act, RBI Act and Indian Evidence Act. to control the cyber crime incidents.

1 Article Cyber Crimes and the Law

The growing reliance on information technology makes critical infrastructure more vulnerable to attacks. This is especially the case with regard to attack against interconnected systems that are linked by computer and communication networks. In those cases, the disruption caused by a network-based attack goes beyond the failure of a single system. Terrorist attack is the unlawful attacks and threats of attacks against computers, networks, and information stored therein. These attacks are done to coerce a government or its people in furtherance of political or social objectives. Terrorist may direct an attack only to disrupt key services. Other terrorist activities like cyber money laundering, terrorism financing and other tools used against banking like hacking, Trojan horse, spreading viruses and worms and denial of services. The Indian Banking Industry is facing the problem of rising trend of cyber terrorism incidents in spite of the enactment of Information Technology Act, 2000 and Information Technology Amendment Act 2008 and also other amended traditional acts to control the various cyber crimes including cyber **Terrorism**

The most important problem regarding Data Theft in banking is it's easily access to the computers and computer net work from anytime and anywhere from the world and bears the international nature. The problems are not limited to any statute alone but occur in all the existing statue likes for example, Contract Law, Banking Law, Criminal Law, Evidence Law and Intellectual Property Law. Data Theft is the brain child of Information Technology. The IT Act 2000 not directly deals with the problem of “Data Theft”. The Indian Banking Industry is facing the problem of cyber crime incidents of data theft in spite the different statute are enacted to control cyber crime incidents of “Data Theft”.

The problem facing by the law enforcement agencies when a citizen of some other country causes harm to citizens of a native country. Let's take an example, India, though Information Technology Act, 2000 does have extra territorial jurisdiction but it is very

difficult to enforce it and exercise it. The problems associated to determination of place where the offence was committed and where several jurisdictions are equally competent.

Due to advent of Information Technology, people are using the internet and computers which have linked the people among them irrespective of the caste, creed and religion by demolishing the boundaries of the states and countries. Due to use of internet, entire world became a global village. The cyber crime has the global impact and it affects the people of every nook and corner of the world. To face the challenges of cyber crimes, different countries have their domestic laws. There are various challenges of taking legal action against cross border elements and legal question of jurisdiction. There are also the problems related to the conflicts of law as well as practical issues associated with obtaining evidence, extradition of offenders and international mutual assistance from the countries involved. Without the co-operation of the all countries, single country alone could not be implemented the laws which controls the cyber crime. International organizations, like OECD and G-8 have come forward with a specific plan of mutual co-operation for combating the threat of cyber crime. Barring few countries, majority of them are not responding for their domestic issues. For want of international jurisdictional agreement there is no repatriation of the cyber criminals. Therefore the miscreants can safely operate from these countries and commit the grave cyber crimes. There are problems of prosecuting cross border elements and legal question of jurisdiction and conflicts of law as well as involving practical issues associated with obtaining evidence, extradition of offenders and international mutual assistance from the countries involved.

The expansion of computers has created a number of problems for the law makers of the country and law enforcement agencies. Legislative rules required various records like paper records, signed records, original records and so many other things. The law of evidence customarily depends on paper records and these papers have to be proved in the court though oral deposition and other kinds of physical objects. As more transactions are carried out by electronic means, it becomes pertinent that evidence of these transactions should be available to display the legal rights that flow from and derived from them. The Indian Banking Industry is facing the problems of evidence to prove in the court of law in the digital and electronic form.

Conclusion

Banks are considered as the most reliable and responsible institution in managing the finances and money matters. A banking organization is the key to economic growth and development of the country. Financial and social reforms were carried out in the banking

sector in India after independence. Nationalization of 14 major banks was carried out in 1969 as a measure of social control of banking. The number of branches increased due to financial reforms implemented in the country. Second phase of nationalization was carried out in 1980 with six more banks as a policy decision under Indian Banking Sector Reform. Expansion of bank branches in the semi urban and rural places was carried out and there was a considerable growth in bank branches all over the country.

The adaption of Information Technology in banking was planned by the landmark report of Dr. Rangarajan Committee (1984) and the signing of the settlement on computerization with Bank Unions in 1987. Due to adoption of technology traditional banking shifted to electronic banking popularly known as e-banking. ATMs were introduced to the Indian banking industry in the early 1990s initiated by foreign banks and customers are now conversant with the concept of banking 24x7 through ATMs. The banking industry recorded a growth of 583% in installation of ATMs within a short span of 9 years (2005-2009) No one can deny the positive role of banking in expansion of bank branches and installation of ATMs. The implementation of new technology in banking industry and advancement of e-banking not only offered opportunities for the profitable development of banking business but also paved the way for new criminal activities to take advantage of technology. Adoption of technology in banking put a serious threat to the banking institutions known as “Cybercrimes”. The global nature of computer technology presents a challenge to nations to address Cyber crime. Domestic solutions are inadequate because cyberspace has no geographic or political boundaries, and many computer systems can be easily accessed from anywhere in the world. The misuse of Internet amounts to cyber crime, and India too have been witnessing a sharp increase in cyber crimes.

To curb and control the crimes arising out of the Internet and Computer Technology the Information Technology Act 2000 were enacted in 2000. It was further amended in 2008 along with the other old traditional criminal laws. The details furnished by Reserve Bank of India (RBI) regarding year wise and amount wise fraud cases in Scheduled Commercial Banks. National Crime Record Bureau (NCRB) published the crime data every year of cyber crime cases. Indian Computer Emergency Response Team – India (CERT-In) authorized by the provisions of Information Technology Act also published the cyber crime security incidents every year. These published figures of cyber crime incident put a question whether the existing cyber laws are efficient and effective to control the cyber

crimes against e- banking in India.

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New International Challenges to Patent System-Conservation of Genetics Resources

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Abstract

It is now commonly agreed that intellectual property rights (IPRs) are part of the economic and policy landscape in which the conservation of genetic resources takes place. This paper will assess the linkages between intellectual property rights (IPRs) and the conservation of genetic resources, and make recommendations on harnessing the positive elements, while militating against the negative ones.

The interplay between IPRs and the conservation of genetic resources occurs at local, national, regional and global levels. Accordingly, it involves a whole range of actors – also spanning the spectrum from local to global. The issues are legal, political, economic, as well as scientific, creating a complex set of challenges. To be effective, the responses to these challenges must be integrated. So far, however, a string of competing policy perspectives has emerged, as have numerous initiatives. More often than not, the focus has been on benefit sharing, technology transfer and conditions of access, rather than on ensuring that intellectual property rights act as an effective incentive for the conservation of genetic resources.

Keywords: Intellectual Property Rights, Biodiversity, Research and Development, etc.

Introduction

Creating the most appropriate balance between conservation of genetic resources and intellectual property protection primarily revolves around two main questions: (a) whether, and to what extent, the conservation of biological diversity provides a justification for IPRs, or their limitations, which goes beyond their classic economic justifications; and (b) whether, and to what extent, it is necessary to create a *sui generis* right for traditional ecological knowledge. This inquiry should shed light on how, if at all, biodiversity conservation could be integrated into intellectual property protection, such that adequate social and economic incentives are provided to corporate entities, as well as to local and indigenous communities.

Conservation of genetic resources in international law and policy

There are several international instruments and institutions that deal with intellectual property rights and the conservation of genetic resources. In most cases the general parameters are laid out in the text of applicable treaties, however, debate on the further development of these regimes, and on how they should be interpreted and applied, is ongoing.

Convention on Biological Diversity (CBD)

The provisions of the Convention

The Convention on Biological Diversity seeks to create a holistic legal regime for the genetic, species and ecosystem levels of biodiversity with the following objectives:

... the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources, including appropriate access to genetic resources and by appropriate transfer of relevant technologies, taking into account all rights over those resources and to technologies, and by appropriate funding¹.

Achieving these objectives has several implications for IPRs and the conservation of genetic resources. Amongst the provisions most relevant to IPRs is the general regime on access to genetic resources and benefit sharing². In this regime, a framework for bilateral negotiations between provider and user countries is set forth. The elements include:

- An affirmation of the sovereign rights of States over their genetic resources;
- The obligation to endeavour to create conditions to facilitate access to genetic resources for environmentally sound uses by other Parties;
- Where a Party agrees to allow access to its genetic resources, this access shall be on mutually agreed terms and subject to its prior informed consent (PIC).

The only provision of the Convention that relates directly to intellectual property rights is stated in Article 16, whose title is "Access to and transfer of technology". Article 16 (5) states as follows:

The Contracting Parties, recognising that patents and other intellectual property rights may have an influence on the implementation of this Convention, shall co-operate in this regard subject to national legislation and international law in order to ensure that such rights are supportive of and do not run counter to its objectives.

¹Article 1.

²Article 15.

Notwithstanding this title, the provision itself appears to apply more generally than only to technology. While it suggests that intellectual property rights will not be created by the CBD itself, the provision does appear to emphasise the need for positive action in developing positive synergies between IPRs and the objectives of the CBD.

Another key CBD provision concerns Article 8, which relates to traditional knowledge. This provision calls for Parties to:

Subject to national legislation, respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity and promote their wider application with

the approval and involvement of the holders of such knowledge, innovations and practices and encourage the equitable sharing of the benefits arising from the utilization of such knowledge innovations and practices."

To facilitate the implementation of this Article, the Parties established an *ad hoc* Working Group on Article 8. Three key elements of the work programme subsequently adopted are to: ensure that indigenous and local communities obtain a fair and equitable share of the benefits arising from the use and application of their traditional knowledge; ensure that private and public institutions interested in using such knowledge obtain the prior informed approval of indigenous and local communities, and; assist Governments in the development of legislation or other mechanisms to ensure that traditional knowledge, and its wider applications, is respected, preserved, and maintained¹.

CBD Article 11 calls for Parties to adopt economically and socially sound measures that act as incentives for conservation and sustainable use. This provision is linked to the very heart of the relationship between IPRs and genetic resources: are IPRs a positive or negative incentive for the conservation of genetic resources?

Finally, Article 22(1) is relevant in defining the CBD's relationship to other treaties, including those that relate to IPRs. It provides that the CBD does not affect the rights and obligations of any Party "except where the exercise of those rights and obligations would cause a serious damage or threat to biological diversity."

Key decisions of the CBD

The CBD has taken a number of decisions relating to IPRs. Decision III/17 on Intellectual

¹Decision V/16, UNEP/CBD/COP/5.

Property Rights called for case studies to be developed on the impacts of IPRs on achieving the CBD objectives, including the relationship between IPRs and traditional knowledge relevant for the conservation and sustainable use of biological diversity. In particular, these case studies are to consider the development of intellectual property rights, including *sui generis* systems or alternative forms of protection, consistent with international law that could promote the achievement of the Convention's objectives. Furthermore, the Decision called for further work to develop a common appreciation of the relationship between IPRs, the TRIPS Agreement, and the CBD.

The Bonn Guidelines include several references to IPRs. According to Paragraph 16(d), Parties should consider taking “measures to encourage the disclosure of the country of origin of the genetic resources and of the origin of traditional knowledge, innovations and practices of indigenous and local communities in applications for intellectual property rights.” Paragraph 43(c) stipulates several parameters to form the basis of the contractual arrangements between providers and users. These include: “Provision for the use of intellectual property rights include joint research, obligation to implement rights on inventions obtained, to provide licences by common consent” and the “possibility of joint ownership of intellectual property rights, according to the degree of contribution.” In addition, national monitoring can include applications for IPRs relating to the material sought¹. The section on the role of intellectual property rights calls for Parties and Governments to encourage the disclosure of the country of origin of genetic resources in applications for intellectual property rights in order to help track compliance with requirements relating to prior informed consent and the mutually agreed terms. It further calls for relevant traditional knowledge to be also disclosed during IPR applications.

The Decision also lists a number of issues that are to be further examined:

- Impact of intellectual property regimes on access to and use of genetic resources and scientific research;
- Role of customary laws and practices in relation to the protection of genetic resources and traditional knowledge, innovations and practices, and their relationship with intellectual property rights;
- Consistency and applicability of requirements for disclosure of country of origin and prior informed consent in the context of international legal obligations;

¹Decision VI/24, UNEP/CBD/COP/6, para. 55(c).

- Efficacy of country of origin and prior informed consent disclosures in assisting the examination of intellectual property rights applications and the re-examination of intellectual property rights granted;
- Efficacy of country of origin and prior informed consent disclosures in monitoring compliance with access provisions;
- Feasibility of an internationally recognised certificate of origin system as evidence of prior informed consent and mutually agreed terms; and
- Role of oral evidence of prior art in the examination, granting and maintenance of intellectual property rights.

The Advantages of Intellectual Property Rights on Genetic Resources

Genetic improvements in crops have the potential to create varieties that meet the world food demand not only for more food, but also help the environment through safer kinds of food that can be grown on lesser land area. The best proof of this can be seen in the industrialised countries - since the inception of newer farming techniques, it is estimated that more than half of the food shortage in northern America and Europe has been solved¹. Needless to say, higher yields of this kind mean that lesser land has to be converted to agriculture.

Agricultural biotechnology also offers the possibility of developing varieties and techniques that reduce the use of fertilisers and pesticides at the same time conserving other natural resources like soil, water and genetic diversity

Pharmaceutical Self-Sufficiency

Intellectual property rights on pharmaceuticals and botanical medicines are very important to foster a large amount of private research initiatives². At a general level, fostering biotechnological research through such intellectual property rights leads to greater societal welfare as a result of medicines that have already been discovered and others that are in the pipeline.

¹Fernandez-Cornejo, J. and McBride, W. D. op. cit. footnote 111.

²Biotechnological firms consider intellectual property rights as important assets. Comment by Graham Dutfield at the Expert Workshop on Trade, Intellectual Property and Sustainable Development, Geneva, 14-15 October, 2002.

Conclusion

Intellectual property rights on biotechnological inventions are meant to be the primary incentive for research initiatives based on genetic resources. Countries (especially the ones rich in biodiversity) have to resolve, as part of their obligations under Article 11 of the CBD, the potential of conventional and sui generis IPRs as measures to promote conservation of genetic resources. This involves a two-step process. Firstly, the positive incentives, both, social and economic, those conventional and sui generis IPRs can create for conservation of genetic resources has to be resolved. Secondly, in those specific instances where conventional IPRs may lead to negative impacts on sustainable use and conservation of genetic resources, countries should consider designing incentives in their biodiversity regimes that change resource-use patterns towards long-term sustainable use options. Biotechnological firms use various forms of intellectual property protection to protect their investments. Whereas pharmaceutical firms rely mainly on patents once the drug is discovered, in the case of agricultural varieties, plant variety protection and patents are used. For agricultural varieties, many jurisdictions do not allow for hybrids to be protected by plant variety rights since they do not fulfil the requirement of stability. Also, hybrids prepared by classic crossing are not patentable since they do not fulfil the requirement of non-obviousness or inventive step. In the case of the botanical sector, almost all herbal medicinal preparations are in the public domain, i.e. medicines that have been in use for a long time already and are described in written documentation. These are not patentable since patent law does not allow patenting of known compounds or known preparations. In the few cases in which a patent is indeed issued, this is usually directed to a new form of pharmaceutical preparation.

But to the extent that they promote biotechnological research, intellectual property rights can be linked to the effects, positive or negative, that the R & D processes, as well as the products themselves, have on sustainable use and conservation of genetic resources. The responsibility to ensure that the granting of intellectual property rights takes into account these effects is further compounded by the fact that intellectual property rights are one of the main sets of property rights being defined on genetic resources.

Biotechnology presents a “product-versus-process” dilemma, that is, of encouraging the industry while simultaneously catering to the environmental risk that could arise from its activities. Within this, the product proponents have focussed mainly upon the benefits of newer medical products, overall well being, increased agricultural efficiency and the amelioration of environmental damages through biotechnology. The process proponents

have, on the other hand, concentrated largely upon the harm caused by such research to sustainable use and conservation of genetic diversity and the protection of traditional knowledge.

The success of biotechnology as a promising venue for drug research is set against the backdrop of an ailing pharmaceutical industry in the 1960s and the 1970s, struggling to find cures for emerging diseases like different forms of cancers. In such a setting, biotechnology offered a newer and more precise set of techniques to explore the potential of genetic resources as sources of drugs.

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Right to Health : Duty of State as Primary Health Provider

Anita Parmar

Abstract

“Everyone has the right to a standard of living adequate for the health and well-being of himself and his family, including food, clothing, housing and medical care and necessary social services...”

-- Article 25 of the UN Declaration of Human Rights

Health is the most important factor in national development. It is a condition of a person's physical and mental state and signifies freedom from any disease or pain. Right to health is a vital right without which none can exercise one's basic human right. The government is under obligation to protect health of the people because there is close nexus between Health and the quality of life of a person. There are various provisions under the constitution of India which deal with the help of the public at large. The founding father of Indian Constitution rightly inserted Directive principles of state Policy with a view to protect the health of public at large. Health is the most precious prerequisite for happiness.

Keywords: Right to health, Fundamental right, Constitution, Health care

Introduction

Health is a fundamental indicator of human development and it indicates the economic and social development of a country. In India, the right to health care and protection have been recognized, since early days, State as the duty – bound the primary provider of health for all. As our country is a founder member of United Nations, it has ratified various international conventions promising to secure health care right of individuals in society. As per International Convention on Economic, Social and Cultural Right Article 12, “Everyone has “the right... to the enjoyment of the highest attainable standard of physical and mental health”.

Under Article-21 of the Constitution Right to life and personal liberty, it has a much wider meaning for health which includes right to livelihood, better standard of life, hygienic condition in workplace. With this Article 21 we should also read Articles 38,42,43 and 47 to understand the nature of the obligation of state

Definition of Health

According to WHO (World Health Organization), Health is a state of complete physical, mental and social well being and merely the absence of disease¹. From the definition itself, it is clearly indicated that condition of life of the individual should incorporate physical, mental, and social well being and must be devoid of disease and infirmity.

Right to health and the Preamble of the Constitution

The preamble of the Constitution of India, endeavors to provide for welfare state under Article 21 of the Constitution, guarantees the right to life and personal liberty. The concept of democratic socialism aims to improve the condition of health care of the people. These provisions are embodied in part III & part IV of the Constitution. Socialist when the egalitarian principles are followed, rights are values and the dignity of everyone is upheld².

Directive Principles of State policy (DPDP) and Health

Part IV of the Indian Constitution which is DPSP imposed duty on States. These provisions are directly and indirectly related with public health. It directs the State to take measures to improve the condition of health care of the people. Article 38 impose liability on State that secure a social order for the promotion of welfare of the people but without public health we can't achieve it. Article 39(e) related with workers to protect their health. Article 41 imposed duty on State to public assistance basically for those who are sick & disable. Article 42 is a primary responsibility³ of the State to protect the health of infant and mother by maternity benefit. Article 47 spell out the duty of the State to raise the level of nutrition and the standard of living of its people as primary responsibility. Some other provisions relating to health fall in DPSP the State shall, direct its policy towards securing health of workers. State organized village panchayats and give such powers and authority to function as units of self government.

Panchayat, Municipality and Health

Only the state but also Panchayat, Municipality are liable to improve and protect public health. "The legislature of a State may endow the panchayats with necessary power and authority in relation to matters listed in the eleventh schedule." The entries in this schedule having direct relevance to health are as follows. Preamble to the Constitution of the World

¹Preamble to the constitution of WHO as adopted by the International Health Conference (Official Record of WHO, no.2, pp. 100)

²Bakshi, P.M., "The Constitution of India", University Law Publishing Co. Publishing Co. Pvt. Ltd., New Delhi, 2003

³Javed V State of Hayana, AIR 2003 SC 3057 4 Article 243G

Health Organization as adopted by the International Health Conference, New York, 19–22 June 1946; signed on 22 July 1947 by the representatives of 61 States (Official Records of the World Health Organization, no. 2, p. 100); and entered into force on 7 April 1948

- Drinking
- Health and sanitation including hospitals, primary health centers and dispensaries
- Family welfare
- Women and child development
- Social welfare including welfare of the handicapped and mentally retarded
- Water supply for domestic industrial and commercial purpose
- Public health, sanitation conservancy and solid waste management
- Regulation of slaughter-houses and tanneries

Fundamental Right and Health

The DPSP are only directive to the State. These are non-justifiable. No person can claim non –fulfilling these directions. Article 21 deals with “no person shall be deprived of his life or personal liability except according to procedure established by law”. The right to live means something more, than animal existence and includes the right to life consistently with human dignity and decency. In numerous cases the Supreme Court held that to health & medical care is a fundamental right covered by Article 21 since health is essential for making the life of workmen meaningful and purposeful and also compatible with personal dignity. Article 23 indirectly related to health. Article 23(1) prohibits traffic in human beings.

It is well known that traffic in women leads to prostitution, which in turn is a major spread of AIDS. Article 24 is relating to child labour it deals with “no child below the age of 14 years shall be employed to work in any factory or mine or engaged in any other hazardous employment. Thus, this article directs the relevance to child health⁴. In addition to constitutional remedies sensitizing of the relevant ordering law towards late health for all adds to the content of right to health. Legal prohibition of commercialized transplantation of human organ and effective application of consumer protection Act to deal with deficient medical services has animated right to health.

⁴Shukla M.N. Indian Constitution, Central law Agency Publication, 2013

Judicial Response towards Right to Health and Medical Assistance

The Indian judiciary plays very active role by entertaining public interest litigation which provides an opportunity to the judiciary to examine the socio economic and environment conditions of the oppressed, poor and the downtrodden people through PIL under Article 32 of the Constitution, the Supreme Court has directed the government to implement the fundamental right to life and liberty executed protection measures in the public interest. Likewise, the court also pointed out that fundamental rights are intended to foster the ideal of political democracy and to prevent the establishment of authoritarian rule, but they are of no value unless they can be enforcing by resort to courts. But it does not mean that Directive Principles are less important than fundamental right or they are not binding on the various organs of the State the Supreme Court, while widening the scope of Article 21 of the Constitution

Paschim Bangal Khet Mazdoor Samity & Others V. State of West Bangal & others⁵ held that in a welfare State, primary duty of the government is to secure the welfare of the people and more over it is obligation of the government to providing medical care to the persons seeking to avail those facilities. Article 21 imposes an obligation on State to safeguard the right to life of every person prevention of human life is thus of paramount importance. The government hospitals run by the State are duly bound to extend medical assistance for preserving human life. Failure on the part of a government hospitals to provide timely medical treatment to a person in need of such treatment, result in violation of his right to life guaranteed under art 21. The Court made certain additional direction in respect of serious medical cases.

- Adequate facilities are provided at the public health centers where the patient can be given basic treatment and his condition stabilized.
- Hospitals at the district and subdivision level should be upgraded so that serious cases be treated there.
- Facilities for specialist treatment should be increased and having regard to the growing needs, it must be made available at the district and sub divisional level hospitals.
- In order to ensure availability of bed I any emergency at state level hospitals, there should be a centralized communication system so that the patient can be sent immediately to the hospitals where bed is available in respect of the treatment, which is required.

⁵AIR 1996, SC2426

- Proper arrangement of ambulance should be made for transport of patient from the public health center to the state hospitals.
- Ambulance should be adequately provided with necessary equipment and medical personnel.
- It is true that no state or country can have unlimited resources to spend any amounts on its projects.

Punjab V. Ram Lubhaya Bagga⁶ Similarly providing medical facilities to an employee by the state cannot be unlimited and this point has arisen in the case of, where medical services under a policy continue to be given to an employee, to get treatment in any private hospitals in India, but the amount of reimbursement may be limited. Such policy does not leave this limitation to the free will of the director, but it is done by a committee of technical experts. The Supreme Court held that if no scale or rate is fixed then in case private clinics or hospitals increase their rate to exorbitant scales, the state would be bound to reimburse the same. The principles of fixing of rate and scale under such a policy is justified, and cannot be held to violate art 21 or art 47 of the Constitution. The court further held that the state can neither urge nor say that it has no obligation to provide medical facilities. If that were so, it would be violation of art 21. It is the primary duty of State to provide for secured health to its citizen. No doubt the government is rendering this obligation by opening government hospitals and health centre's, but to be meaningful they must be within the reach of its people and of sufficient liquid quality.

Science it is one of the most sacrosanct and sacred obligation of State, every citizen of this welfare state look towards the state to perform this obligation with top priority including by way of allocation of sufficient funds. This in turn will not only secure the rights of its citizen to their satisfaction, but will benefit the state in achieving its social, political and economic goals. This sacred obligation shall be carried out by the health professionals whenever they are attending the life of an accident victim with due care and diligence. In light of the above statement.

Premanand Katara V Union of India & Others⁷ Supreme Court, in its landmark judgment ruled that, every sector whether at a government hospital or otherwise has the professional obligation to extend his services with due expertise for protection life. No law or State action can intervene to avoid or delay the discharge of the paramount obligation

⁶ 8. AIR 1988 SC 117

⁷ AIR 1989 SC 2039

being total, absolute and paramount, law or procedure whether in states or otherwise which would interfere with the discharge of this obligation cannot be sustained, and must, therefore give way.

Similarly, the Supreme Court in **State of Karnataka V Manjanna**⁸ deprecated the tendency of refusal to conduct medical examination of rape victim by doctors in rural government hospitals unless referred to the police. The Court observed 'we wish to put on record our disapproval of refusal of some government doctors, particularly in rural areas, whether hospitals are and far between to conduct any medical examination of a rape victim unless the case of rape is referred to them by the police'. The court added that such a refusal to conduct the medical examination necessary results in the delay in the ultimate examination of the victim by which the evidence of rape may have been washed away by the complainant herself or be otherwise lost, the court, therefore, directed that the State must ensure that such a situation does not recur in future.

In **CESE Ltd V Subhash Chandra Bose**⁹ the court held that the health and strength of worker is an integral facet of right to life. The aim of fundamental rights is to create an egalitarian society to free all citizens from coercion or restriction by society and to make liberty available for all.

The court, while reiterating its stand for providing health facilities in **Vincent V. Union of India**¹⁰, held that a healthy body is the very foundation for all human activities.

A three-judge's bench of the Supreme Court in **Consumer Education & Research Centre & Others V Union of India**¹¹ ruled that right to health and medical care, to protect health and vigor while in service or post retirement, is a fundamental right of a worker under article 21, read with articles 39(e), 41, 43, 48A. Ruled that right to health and medical care, to protect health and vigor while in service or post retirement is a fundamental right of a worker under article 21, read with articles 39(e), 41, 43, 48A

All related articles and fundamental rights are intended to make the life of the workman meaningful and purposeful. Lack of health denudes him if his livelihood compelling economic necessity to work in an industry exposed to health hazards due to indigence to bread winning for himself and his dependants should not be at the cost of the health and

⁸ AIR 2000 SC 2231

⁹ AIR 1992 SC 573

¹⁰ AIR 1987 SC 990

¹¹ AIR 1995 SC 42

vigor of the workman. The court further ruled that the jurisprudence of personhood or philosophy of the right to life envisaged in art21 of the Constitution enlarges its sweep to encompass human personality. The health of the worker is an integral facet of the right to life. In that case, health insurance while in service or after retirement was held to be a fundamental right and even private industries are enjoined to provide health in insurance to the workman.

Though the Supreme Court of India in a series of judgments has declared the right to health care to be fundamental right, it had not been given due recognition by the State, what is also quite unfortunate is that in a country where poor and marginalized are more in members and these people cannot afford paid services in any government and private hospitals, the State should develop novel health insurance policies at nominal rates.

Till today no effective steps have been taken to implement the constitutional obligation upon the state to secure the health and strength of people. It has rightly been said that nutrition, health & education are the three inputs accepted as significant for the development of human resources. For achieving the Constitutional obligation and also objectives of Health care for all there is a need on the part of the government to mobilize nongovernmental organization and the general public towards their participation for monitoring and implementation of health care facilities.

Conclusion

The term right to health is nowhere mentioned in the Constitution yet the Supreme Court has Health care is not a privilege. It's a right as fundamental as civil rights. It's a right as fundamental as giving every child a chance to get public education.”

--Rod Blagojevich

interpreted it as a fundamental right under Right to life enshrined in Article 21. It is a significant view of the Supreme Court that first it interpreted Right to Health under part IV i.e. Directive Principles of state policy and noted that it is the duty of state to look after health of the people at large. In its wider interpretation of Article 21 it was held by Supreme Court that, the rights to health is a part and parcel of right to life and therefore are of fundamental right provided under Indian Constitution in the real sense. The court has played a pivotal role in imposing positive obligation as authorities to maintain and improve public Health.

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Role of Women Entrepreneurs in Development of India

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Abstract

Entrepreneurship as a part of Human Resource Development is very essential and the role of women in that is very significant. In Comparison to other countries, the development of women entrepreneurship is very slow in India, especially in rural areas. However, middle class women are not too eager to alter their role due to fear of social backlash. The progress is more visible among upper class families in urban areas. As said by Pt. J L Nehru, “When women move forward, the family moves the village moves and the nation moves”

This paper focuses on status and contribution of women entrepreneurs in India's development. Any understanding of Indian women's identity, especially for their contribution in emerging new paths, will be incomplete without a walk down the place of Indian history where women have lived. The paper talks about the status of women entrepreneurs and the problems faced by them. Purpose of this empirical study is intended to find out various motivating and de-motivating internal and external factors of women entrepreneurship. It will also suggest the way of eliminating and reducing hurdles of the Women Entrepreneurship Development in Indian context.

Keywords: Entrepreneurship Development, Women Entrepreneurs, Key to Success, Problems, Challenges, etc.

Introduction

Entrepreneurship is necessary to initiate the process of economic development of both developed and developing countries as it is the back bone of economy of any country. Entrepreneurship refers to combining the available resources of production in such a new way that it produces the goods and services more satisfactory to the customers. Entrepreneur is a catalytic agent of change. It is also instrumental in sustaining the process of economic development. Every country tries to achieve economic development for prosperity and better life standard of its people. Development has economic, social and political dimensions and is incomplete without the development of women who constitute

about 50 per cent of total population. So, contribution of women is essential in economic activities for healthy nation building. Women entrepreneur has been recognized during the last decade as an important untapped source of economic growth. Women entrepreneurs create new jobs for themselves and others and by being different solutions to management. In today Indian scenario when India is turning out to be an economic power house the recent financial crisis which has affected countries has had its impact on the minds of women as they have understood the need to earn more.

In Indian scenario, women have to face many problems in carrying out any economic activities or undertaking any entrepreneurial ventures. Women have to face various socio-economic and other problems as entrepreneurs as they are not treated equally as men due to social and cultural traditions. Now in recent India, it is observed that there has been an increasing trend in number of women-owned enterprises as the result of drastic change in the present world. Women are participating in large number in the present world of business.

Today, more and more women are undertaking various economic activities. Female entrepreneurs are active at all levels domestically, regionally and globally. Women entrepreneurs comprises only one third of all entrepreneurs. In the era of globalization, the challenges are far greater for women entrepreneurs. They are playing very important role in socio-economic development of all the countries. As of their participation, global economy is being changed at present. All over the world, it is estimated that approximately one third of the business organizations are owned by women. In India, the position is near about the same. The precious contribution of women in the area of entrepreneurship can be summarized as:

1. Promotion of capital formation by mobilizing the idle saving of the public
2. Creation of immediate employment for elimination of unemployment problem
3. Promotion of balanced regional development
4. Encourage effective mobilization of capital and skill, which might remain unutilized
5. Promotion of India's export trade

Review of Literature

Anita Tripathy Lal's (November 15, 2012) main objective of this research was to study the significant rise of Women Entrepreneurs in India and how it has evolved since the pre-

independence days (before 1947), during the British colonial days. The study also analyzed the reasons that have prompted the women entrepreneurs to unleash their entrepreneurial energies into start-ups. Based on both qualitative and quantitative analyses the growth of women entrepreneurship in India have been studied into four different periods – Pre-Independence Period (before 1947), Post-Independence Period (after 1947), Post-Liberalization Period (after 1991) and Post -Global Recession period (2008 onwards). The study finally concluded to what extent the various support systems in India can further foster a conducive ecosystem for the Women Entrepreneurs in India. Cohoon, Wadhwa and Mitchell (2010) presented a detailed exploration on mobilization, background and experience of men and women entrepreneurs. This study identified top five financial and psychological factors motivating women to become entrepreneurs. These are desire to build the wealth, the wish to capitalize own business ideas they had, the appeal of startup culture, a long-standing desire to own their own company and working with someone else did not appeal to them. The study concluded that the women are very much concerned about protecting intellectual capital than their counterpart. Mentoring is very important to women, which provides encouragement and financial support of business partners, experiences and well developed professional network. Dr. Sunil Deshpande and Ms. Sunita Sethi, Shodh, Samiksha aur Mulyankan (Oct.-Nov.-2009) in their research paper exhibits the encouraging and discouraging factors in an enterprise and to provide solutions to the various problems faced by the women entrepreneur group. For the betterment of women entrepreneur emphasize should be on educating women strata of population, spreading awareness and consciousness amongst women to outshine in the enterprise field, making them realize their strengths, and important position in the society and the great contribution they can make for their industry as well as the entire economy. Binitha. V. Thampi (January 2007) in his thesis attempts to understand the association between women's work and children's well-being in a specific social setting. It also tries to explain the causal relationship of women's work status on child well-being. It was found that as the number of activities on the work front increases, the amount of time that mothers spend on childcare decreases. This study shows that though maternal employment does not result in child morbidity outcomes, it certainly constrains women in finding alternate care arrangements as well as compelling them to perform most of the work in the childcare regime.

Objective

1. To study the role of women entrepreneurs

2. To study Development of Women Entrepreneurs
3. To study the categories of Women Entrepreneurs in India
4. To find the problems encountered by women in starting business Enterprises

Methodology of Study

The paper work is based on extensive study of secondary data collected from various books, National and International Journals and public and private publications available on various websites and in libraries focusing on various aspects of Women Entrepreneurship. This research is also a desk study based on secondary information especially from various articles, journals, and websites.

Role of Women Entrepreneurs

1. Women entrepreneurs tend to be highly motivated and self-directed, they also exhibit a high internal locus of control and achievement. Researchers contend that women business owners possess certain specific characteristics that promote their creativity and generate new ideas and ways of doing things.
2. Women-owned businesses are one of the fastest growing segments of Indian economy. According to the Small Business Administration. Starting a business needs a lot of scientific and non-scientific knowledge. Therefore, an entrepreneur must know the budgeting, financing and marketing etc. Further, it is the importance of keeping an open and positive frame of mind. One has to be confident of success in order to convert it into reality.
3. One key characteristic of all successful entrepreneurs is that they have vision. They find a niche in a particular market and find a way to fill it. They give life to their vision/business either personally or through finding a way to make it happened. This vision keeps them focused and able to bring innovative product or service to the market.
4. Entrepreneurs are also very self-motivated. They don't wait for someone to tell them to get to work. They are self-propelled and do the work because they want to do. They know that it takes discipline and self-sacrifice to make their dreams come true.
5. At this stage it may be up to the entrepreneur to oversee and implement all aspects of the business. To make it work, one has to have an unfailing believe in oneself and ideas. Times will get hard. It's likely that your business won't be an instant

success. Most new businesses fail in the first few years, so it takes courage to know that and still give it a go. The ones that do succeed know that it takes perseverance to make it happen.

6. Surely, it will make suffer setbacks and face hardship, but you will also be richly rewarded if you stick with it. You will be able to be your own boss and see your ideas come to fruition. This is what most of the people never experience. It is a comfort and a challenge to know that much of your success depends on what effort you expend.
7. It needs to think hard before deciding to quit the present job and starting own business. It is doable but not without many sacrifices, other than the following talents. Viz. Sharp Communication skills, Good interpersonal skills, Consensus building competencies, Very High level of Emotional Quotient, good Decision-Making Capabilities

Women Entrepreneurship Development in India in Contrast to Leading Nations

An attempt has been made to make a comparative study of women entrepreneurship development in selected leading countries vis-à-vis India by analyzing the data regarding percentage of women work participation in Table 1. The data presented in Table 1 shows that USA is at the top followed by UK in terms of women work participation. India's position in women work participation is the lowest in comparison to other countries. Women work participation in India has got momentum recently as the percentage of work participation went up from 14.2% in 1970-71 to 39.6% in 2015-16.

Reasons for Slow Progress of Women Entrepreneurs in India

The problems and constraints experienced by women entrepreneurs have resulted in restricting the expansion of women entrepreneurship. The major barriers encountered by women entrepreneurs are:

1. The greatest deterrent to women entrepreneurs is that they are women. A kind of patriarchal society is the building block to them in their way towards business success. Male members think it a big risk financing the ventures run by women.
2. Male chauvinism is still prevalent in many parts of the country yet. Women are looked upon as 'abla' i.e. weak in all respects. In a male dominated society, women are not treated equal to men that act as a barrier to women's entry into business.
3. Women entrepreneurs have to face a stiff competition with the men entrepreneurs

who easily involve in the promotion and development area and carry out easy marketing of their products with both the organized sector and their male counterparts. Such a competition ultimately results in the liquidation of women entrepreneurs.

4. Lack of self-confidence, will-power, strong mental outlook and optimistic attitude amongst women creates a fear from committing mistakes while doing their piece of work. The family members and the society are reluctant to stand beside their entrepreneurial growth.
5. Women in India lead a protected life. They are even less educated, economically not stable nor self-dependent, which reduce their ability to bear risks and uncertainties involved in a business unit.
6. The old and outdated social outlook to stop women from entering in the field of entrepreneurship is one of the reasons for their failure. They are under a social pressure, which restrains them to prosper and achieve success in the field of entrepreneurship.
7. Unlike men, women mobility in India is highly limited due to many reasons. A single woman asking for room is still looked with suspicion. Cumbersome exercise involved in starting with an enterprise coupled with officials humiliating attitude towards women compels them to give up their spirit of surviving in enterprise altogether.
8. Women's family obligations also bar them from becoming successful entrepreneurs in both developed and developing nations. The financial institutions discourage women entrepreneurs on the belief that they can at any time leave their business and become housewives again.
9. Indian women give more emphasis to family ties and relationships. Married women have to make a fine balance between business and family. The business success also depends on the support the family members extended to women in the business process and management.

Some cases of successful Indian women entrepreneurs

1. Indra Nooyi (CFO, Pepsico Indra Nooyi) is the current chairman and CFO of the second largest food and beverage business, Pepsi Co. born in Chennai, Indra did her Bachelors in Science from Madras Christian College in 1974 and a Post

Graduate Diploma in Management (MBA) from Indian Institute of Management, Calcutta in 1976. Beginning her career in India, Nooyi held product manager positions at Johnson and Johnson and textile firm Metturbearse. Nooyi joined PepsiCo in 1994 and was named president and CFO in 2001. She has been conferred with prestigious Padma Bhushan for her business achievements and being an inspiration to India's corporate leadership.

2. Naina Lal Kidwai (Group General Manager and Country Head – HSBC, India) a Bachelor's degreeholder in Economics from Delhi university and an MBA from Harvard Business school. In fact, Kidwai was the first Indian woman to graduate from Harvard Business School. She started her career with ANZ Grindlays. Presently, she is also serving as a non-executive director on the board of Nestle SA. Kidwai is also global advisor at Harvard Business school. Indian government conferred Padma Shri award on Naina for her contributions in the field of Trade and Industry.
3. Kiran Mazumdar Shaw (CMD, Biocon Ltd) completed her Bachelors in Zoology from Mount Carmel College, Bangalore University. She later did her post-graduation in Malting and Brewing from Ballarat College, Melbourne University. She worked as a trainee brewer in Carlton and United Breweries, Melbourne and as a trainee maltster at Barrett Brothers and Burston, Australia. She started Biocon in 1978 and spearheaded its evolution from an industrial enzymes manufacturing company to a fully integrated bio-pharmaceutical company. Today Biocon under Shaw's leadership has established itself as a leading player in biomedicine research with a focus on diabetes and oncology. Kiran is also a member of the board of governors of the prestigious Indian School of Business and Indian Institute of Technology Hyderabad. Kiran received the prestigious Padma Shri (1989) and the Padma Bhushan (2005) from the government of India.
4. Vaidya Manohar Chhabria (Chairman of Jumbo Group) wife of a late Manohar Rajaram Chhabria is now leading Jumbo Group, a Dubai based Dollar 1.5 billion business conglomerate. She was ranked 38th most powerful women by the Fortune Magazine in 2003.
5. Neelam Dhawan (Managing Director Microsoft India) is well known figure in IT Industry of India. Before joining Microsoft, she worked in almost all the top IT

Companies.

6. Lalita Gupte and Kalpane Morparia (Joint Managing Directors of ICICI Bank) have made immense contribution to the banking sector in India.
7. Ekta Kappor (Creative Director at Balaji Telefilms) is popularly known as the 'Soap queen' is credited for bringing about a revolution in the Indian small screen industry. She is a rare combination of beauty and brain and a great inspiration for budding entrepreneurs.
8. Shahnaz Hussain (CEO, Shahnaz Herbals Inc) is the biggest name in herbal cosmetics industry in India. She has introduced many trends setting herbal products. Currently, the Shahnaz Husain Group has over 400 franchise clinics across the world covering over 138 countries. Her pioneering work got recognition from Govt of India when she was conferred with prestigious Padma Shri award in 2006.

Conclusion

According to the study it has been observed that Women are very good entrepreneurs, and prefer to choose the same as they can maintain work balance in life. Even though we have many successful Women Entrepreneurs in our country, but it should be cross-checked with the real entrepreneurs. These factors may vary from place to place and business to business, but women entrepreneurship is necessary for the growth of any economy whether it is large or small.

It is observable that women entrepreneurs have proved to be a strong driving force in today's corporate world. They are competent to balance their duties of both motherhood and entrepreneurship, but they comprise of almost half of all businesses owned today. Woman can pick up a job any day, but if she becomes an entrepreneur she can provide a livelihood to 10 more women at least...!! Highly educated, technically sound and professionally qualified women must be encouraged for managing their own business, rather than being employed in any outlets. The uncultivated talents of young women can be identified, trained and exploited for various types of industries to increase the productivity in the industrial sector as well as the nation. Now a day even after facing so many obstacles The Indian women is now becoming an educated and economically independent.

Governments have come forward with so many lucrative schemes like facilities, concessions and incentives exclusively for women entrepreneur. Women entrepreneurs

face so many problems from financial, marketing, health, family, and other problems point of view. The governments and financial institutions must enforce some measurable guidelines for women entrepreneurs from time to time. Hope the suggestions forwarded in this article will help the entrepreneurs as well as Entrepreneurship Development Institutions to develop better strategies to encounter the problems. At last this task is for the welfare of the women as well as society and nation.

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Table-1: Country ranking based on Women Work Participation

Country	Percentage
USA	48
U.K	45
Canada	43
Indonesia	42
Sri Lanka and Brazil	39
France	38
India	37.6

Women Empowerment: A Legal Indian and secular Philosophical Perspective

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Abstract

Jawaharlal Nehru once said that, “You can tell the condition of a nation by looking at the status of its women”. Women empowerment in the 21st. Century is a dream yet to be realized. The issue of women empowerment is a burning issue and receives the attention from all over the globe to demand immediate attention to solve this problem. Women have been deprived from their social, political and economic rights in male dominant societies. This biased attitude towards women keep them under the feet of suppressed class of society thereby putting a restraint on the liberty of women class, even in our day to day life women have been victimized by different social evils which are unnecessarily associated with them. To stop violence in domestic life, women empowerment is considered a good tool for upliftment of this traditionally underprivileged class of society. The constitution of India has also framed certain laws and policies to protect the women and provide them liberty, equality and justice. My present effort would examine the legality of women empowerment and status of women in accordance with its social implications.

Keywords: Women Empowerment, Rights, Power, Patriarchal, Male Dominated Society, Constitution.

Conception of Women Empowerment

Empowerment of women is of deep concern to the present world. This consciousness gained ground very rigorously in later part of twentieth century. Women Empowerment is an upliftment initiative in the status of women in all walks of life like social, political and their economical rights and to find her place in societies and communities too. Women empowerment is not a new concept, but nurtured and has been expressed in different cultures and traced back in ancient civilizations like Greece, china and India. Till 19th century, there was not any organized women's movement developed for their advancement. The period between 1940's and late 1970's saw an emergence of Indian women's movement and it was not until the 1980's that the women's movement gained real momentum.

In modern times different movements are established in societies to uplift the status of women in the world and the feminist movement is a prominent one which fights for a

common cause of women. The prime motto of feminist movement is to overcome the oppression of women and protect them against gender discrimination and other domestic violation of women. The term (power) associated with women is to empower and here it does not mean that women wants to control over man or suppress their rights or to exploits them as it is commonly understood, but to demand her equal share in every sphere of life and justice could be done with women on grass root level, So that she would became independent in thinking, express their views and ideas and use them in practice, financial control like money and management, powers in decision making in home, community, society and at nation levels. The dictionary meaning of the word 'empowerment' is the granting of political, social and economic power to an individual or group, or the process of supporting another person to discover and claim personal power, or the state of being empowered in general or specific. Empowerment is not mere an idea based theory, but it is a real practice to prepare a way to improve the conditions and status of women in all levels, because women is considered as a real architecture of society and nation.

In this regard, *Akthar, F.* has rightly observed that, “We would not like women's empowerment to result in women's taking over men's power within the same exploitative and corrupt society”. In a feminist perspective the word empowerment meant to Griffen is adding to women's power, and power meant to have control, being recognized and respected as equal citizens. Power for her meant, “Being able to make contribution at all levels in the society and not only in home.” Power also means to have women's contribution recognized and valued.” According to the country report of the government of India “empowerment means moving from a position to enforced powerlessness to one of power. It would promote women's inherent strength and positive self-image.”

A change which improves the women's fallback position and bargaining powers within a patriarchal structure, and identify different causal pathways of change, material, cognitive, perceptual and relational is a positive change and occurrences of such change is the process of empowerment. Empowerment is a process of internal and external change. A change occurs within a person regarding their sense or belief in her ability to make decisions and to solve her own problems. The expression in the ability to act and to implement the practical knowledge, the information, the skills, the capabilities and other new resources acquired in the course of the process (Parson's 1988).

Internal change in people for some writers as psychological empowerment and external change as political empowerment. Psychological empowerment deals with a person's

level of consciousness and sensation, while political empowerment is a real change and deals with the person to take part in the acts of decision making that affect his life. A person requires both these changes in life to empower, internal strengths and environmental conditions are important to achieve the psychological empowerment and political empowerment respectively and by them person experiences new abilities. The integration of both these changes enhances quality of life of women as a whole (Gruber & Trickett 1987). It is very much clear by the above discussion that the integration of both psychological and political changes paves the way to complete the task of empowerment of women

Status of Women

Woman has been considered as the back bone of a nation and plays a pivotal role in the development of Nations. The popular UNESCO slogan is a good move to spread the message of women empowerment at global level, “Educate A Man And You Educate An Individual; Educate A Woman And You Educate A Family”. Woman has been highly respected in India by giving her the honor of goddess and has a long history of worshiping the women Goddess such as LAXMI MAA, goddess of wealth; SARSVATI MAA, goddess of wisdom and DURGA MAA, goddess of power. It seems quite unfortunate to see now the women in India on one hand she is worshiped as Goddess in one movement and on the other movement she is treated not mere than a slave. Despite the fact that this Goddess image of women in India has always been ignored in male dominated societies. From time to time women had proved her ability and capability in each arena in the society and for its development. Even though women had enjoyed higher positions in life in various multi cultured communities at different times, but these cases are found very rare in India and in the world history. This is the one of the aspect of reality and the other aspect of reality is that the maximum number of women has been deprive by their social, political, economic and educational rights in life, and has suppressed by male centered societies, due to this bifurcated attitude towards women folk deeply felt themselves insecure, incompatible, dependent in male dominant societies. In day to day life Violence of women in modern world is decreased a little with respect to social, political, and economical point of view in developed countries, but much attitude has not changed regarding the women empowerment in developing and under-developing countries and the situation is still worse. The violence like gender discrimination, infanticide, dowry system, sexual harassment at work places, domestic violence, rapes, mobility of women, trafficking of women and girls' education etc. are prime focused and debatable issues not only in India

but world-wide and demands an untired effort to solve these social problems all over the globe. In fact, urban women of India and other developed countries got awareness about violence's of women, but women in rural areas are still affected by these kinds of domestic violence and other violence's too.

In India different personalities in the early nineteenth century make efforts to reformation of society and to eradicate social evils which were prevailing in the Indian states at the time when India was under the control of British. Raja Ram Mohan Roy was one of the notable figures of Bengal who first initiate to reform the society of Sati tradition, early girl's marriage and which were practiced in Hindu religion. Another notable contribution to the same cause was spread further as a movement by Keshab Chandra Sen, he advocates widow remarriage and an act was passed as 'widow remarriage act in 1854' by his efforts. In British India Lord Bentinck Governor General of India also speaks against the practice of 'Sati tradition' in (1829). There are other persons as well who equally contribute and helps in spreading this movement all over India. Since then, till now the fight against these social evils prevailing in the society is on and became the main obstacles to empower the women to show their independent existence in societies and lead an active not suppressed life which is their birth right. In 2008 an incident of sati was observed in Rajasthan such shameful acts are still take place in the societies in India in an age, where life is considered as a most precious and a divine gift.

Challenges to Women Empowerment

There are several challenges which become the prime obstacles in the way to emancipate women in India. Social norms and family structure in developing country like India where the picture of subordination status of women is see more clearly. One of the norms is the continuing preference for son over girl child, means gender discrimination which is present in almost all societies and communities. The society is more biased in favors of male child over the female child with respect to assess to education, nutrition and other opportunities and the girl child is depriving always. Parents have a belief in their male descendants that they are the bread earners in their old age, they support and look after his family after him and are four runners of their race in the world. Women empowerment faces other challenges like, poverty which directly affects the life of women and deprived them to garb the opportunities in all fields particularly education, employment and socio-economic status etc. and poverty enforces her to equally participate in physical labour.

The other several challenges such as, lack of education, female infanticide, financial constraints, family responsibility, low mobility, low ability to bear risks, low need of

achievement, absence of achievements in life, social status, dowry, marriage in same casts and early girl marriage and atrocities on women (rape, subdued, killing) these are the social problems which we experience in our day to day life, are become the main obstacles in the process of improving the condition and status of women in India.

This condition of women would be improved by working on certain steps in societies very seriously. If women want to emancipate, for that she would have to change herself first only then she would achieve the goals of freedom from all kinds of violence. The ways by which the process of women empowerment is possible are, changes in women's mobility and social interaction, changes in women's labour patterns, changes in women's access to and control over the resources and changes in women's control over decision making, providing education, providing self-employment and self-help groups, providing basic needs like nutrition, health, sanitation and housing, encouraging women to develop skill and make a career and becomes self-dependent.

There are various schemes that have been launched by the government of India, since independence to uplift the status of women from social, economic and political points of view. The motto of these schemes is to create awareness in women about her rights of life. It is possible through the medium of education. This is rightly observed by 'Nelson Mandela' that, "Education is the most powerful weapon which you can use to change the world". Education is considered as the best tool to bring any kind of revolution in societies. If we look into the census of the year 2013, the men literacy rate is 82.14% and women literacy rate is 65.43% in India which shows a big gap in literacy rates of two genders. The dire need of the hour is to fill this huge gap of difference in education and make efforts to bring women equal to men with respect to education, which open the channels of development thereby give them a chance to participate in the developmental process of local and national level.

Discrimination of Women

If constitution as well as nature has given equal rights to women and men, then on what grounds she has deprived but as a universal fact both are equal. Is it only on the name she is associated with i.e., "women-hood" on this basis she is deprived or is considered physically weak, weak In decision making and are associated with such a criteria less issue, while addressing to life. If we realize it from intellectual point of view, the so called weaker section of society having tremendous potential to use their faculty of reason while judgments, exercise of skills and money saving and using their saving attitude at different stages of life to develop the family, societies, communities and nation very smoothly and

had proved it so many times in the history. Even though women equally contributed to societies as men does, since the ages whenever she finds any opportunity she did not miss it to prove her worth. Another important point is that the intrinsic value of life is same in the two sections of society men and women, the aims and goals which works as positive pre-conditions of one's life to make life active all the time to achieve these goals and aims in life. In the above discussion women have proven her worth in all fields like intellectual, physical, social and political and is stand parallel to men, then on what grounds women has been deprived of rights in life. In the modern world women is not stand far behind than men to show her existence in the race.

In the words of Gandhiji, “Women is the companion of man, gifted with equal mental capacities, she has the right to participate in all activities parallel man, and has the same right of freedom and liberty as men have, even the most ignorant and worthless men have been enjoying a superiority over women which they do not deserve and ought not to have”.

Reservation and Women Empowerment

India is a multi-cultural, multi-religious, multi-traditional and multi-castes country in the world map. Nearly about the 70% of the population of India resides in rural areas and only the 30% population belongs to urban areas. Women population is at least 50% in the world of total population. In almost each country the sex ratio of men and women is equal except India, because one the main reason is gender discrimination found deeply rooted in Indian societies. In Indian constitution the issue of gender equality has been discussed in its fundamental duties, fundamental rights and directive principals and gender discrimination has been banned by the constitution. The constitution of India not only grants equal rights to women, but have to adopt certain measures to uplift the present position of women in the country. In the constitution of India various amendments have made in respect to secure and uplift the status of women in country, but the amendment of 73rd and 74th of Indian constitution are considered as a good move with respect to eradicate gender discrimination and inequality of weaker sections of society. Several laws have been enacted by the constitution of India to emancipate Indian women from these unethical approaches, which are acted forcibly on them by the male dominated societies. The laws which are enacted by the constitution to guarding the status of women and nondiscrimination of sexes are:

1. Equality before law for all persons. (Article 14).
2. There should be no discrimination on the basis of religion, cast, sex, race and place of birth. {Article 15(1)}.

3. Special provisions have made by the constitution in favor of women and children. {Article 15(3)}.
4. Equality of opportunity in public employment. (Article 16).
5. Equal rights of men and women to adequate means of livelihood. {Article 39(a)}.
6. Humane conditions of work and maternity relief for women. (Article 42).
7. To secure for all citizens a uniform civil code throughout the country. (44).
8. It is a constitutional duty of every citizen of India to renounce practices derogatory to the dignity of women. [Article 51(A) e].
9. Not less than one-third of the total number of seats to be filled by direct elections in every Panchayat to be reserved for women and such seats to be allotted by rotation to different constituencies in a Panchayat. [(Article 243 D(3))].
10. Not less than one third of the total number of offices of chairpersons in the Panchayats at each level to be reserved for women. [(Article 243 D(4))].
11. Not less than one third number of seats to be filled by direct elections in every municipality to be reserved for women and such seats to be allotted by rotation to different constituencies of a municipality. [Article 343 T(4)].

All these provisions in Indian constitution are made for social justice, equality and protection of women. To make people aware of these provisions would be helpful in empowering the women. A little has been done and a lot have to be realized yet regarding the uplift of women. In 1995 the fourth world conference for women held in Beijing provides a platform for women to participate in political, economic and social decision making. In this world conference it has been decided that 30% of quota would be reserved for women to participate in social, economic and political decision making in lower and higher levels of spheres of life.

Prior to India there are 25 countries who already gave reservation quota to women for upliftment. If women constitute the 50% of total population, then why she is deprived of rights. Women have the right to vote only because men get benefit out of it as well. "If we take the example of casting of vote process, there it is not mandatory that man won the election by a vote which was cast by man alone, there are women participators also who helped man to resist a win by a vote which was casted by women equally. But she is considered unequal at the time to grab the opportunities in life, man shows his egoistic nature and suppress her ideas and expressions". Women has suppressed in society by men's

attitude towards her. The question is- Is this reservation quota only a showcase of articles framed by constitution to protect women? In every constitution of each country, provisions for women have given special importance and talking about equal rights everywhere and give them reservation particularly in India to upgrade their status. Can this mere reservation quota really empower the women in social, economic and political structures? On one hand constitution of India has given women equal status to men in all respects and on other hand tied them with the rope of special reservation quota, so that they always feel themselves weak in men dominated society. How this could be justified.

If laws of constitution of India and laws of nature stand women equal to men with respect to their different rights, then why women have associated with the term 'Reservation'. Reservation is like a feeling, developed in a person and results as oppression. Women's are used as a means to achieve the goals by the men centered society. If women have considered as the core stone of development of nation, then first she should be released from this reservation problem. Reservation is a main obstacle in the way of empowerment of women not a solution. Maximum participation of women in social, economic and political fields inversely proportional to maximum development and minimum participation means minimum development. By this I conclude that there are still certain loopholes which are mandatory to fulfill, otherwise empowerment of women is more or less an untouched dream which can never come true. The equality of gender is a dream and yet to be realized.

Conclusion

The empowerment of women is most debatable issue discussed in the world today. We say that the oppression of women is continuing in the 21th century in some parts of the world. Despite give the reservation to the women folk to uplift their status in the societies. The overcome incident of sati-custom of India is the live example of empowerment of women. Education is the best tool to enhance the status of women. But the education of the parents is equally important to protect the status of women. The organization of schemes and programmes on basic level and NGO play a crucial role to make women empower.

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Status of Women in Panchayati Raj

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Abstract

Women are a major part of the country's population, but their political representation and partnership are definitely quite low. In any democratic system, it is natural to have a question of being democratic in such a system with half part of society. Women are a major part of the country's population, but their political representation and partnership are definitely quite low. In a socialist nation such as India it is also necessary that all sections of society should be incorporated in the process of development. The present paper focuses over the representation of women in panchayats and other male dominating areas which are taken as areas to promote women to lead our country to the pinnacle of development and growth.

Keywords: Panchayati Raj, Reservation for Women, Indian Society, Gender Bias etc.

Introduction

Since thousands of years, the position of women in Indian society was neglected. She was only meant a thing for pleasure and recreation. At her father's home she was treated as 'Paraya Dhan' and at her husband's home she was known as an animal just like a cow, whom you can milk for food and have babies. The condition of women in India was somehow started to become good only after independence. The governments from time to time has taken steps to include this half share of papulation to the mainstream. Support for this approach was also made in the report of Balwantrai Mehta Commission in the year 1959 that women of any country cannot have any real progress without participating in the development process. Also, in the year 1974, the Commission suggested the formation of women panchayats on the status of women in India. In addition, the report of the Ashok Mehta Commission in 1978 also recommended to include women in panchayats at a widespread level.

In Indian society, due to the prevalent 'Sexual Bias and Prejudice', the share of women in public affairs remains zero. The basis of this bias is biological determination, which is based on the superiority of the earth, but it is unfortunate to differentiate between abilities from the work done by women in the modern era, because it cannot meet the nation's full

potential of the capacities of the minorities of society.

It is also worth noting that by promoting at Panchayat level, overall inclusion at the state and national levels is possible because Panchayat level is the starting school of democracy. Significantly, political participation will also contribute to socio-economic self-sufficiency. It is often argued that the political leadership of women will create a world with more cooperative and less conflict-oriented people.

The basis of this argument is 'Sattri Charitra', which contains tolerance, humility and peace. Also, water deficiency, environmental protection, education and prohibition of drugs are among some of the important issues women have dealt with in a more effective manner. It is also worth noting that the political involvement of women will reduce the sexual division of labor and women will be able to participate in public works. Thus, women's empowerment will be done on one side of the institutions of local administration, while the participation of all sections of the society will enable the nation to achieve the goal of rapid, sustainable and inclusive development.

Challenges in Actual Implementation Article 73 (24) (d) and 243 (T) were added under the 73rd Constitution Amendment Act, 1992, in which at least one third of the total seats reserved for Panchayati Raj and urban bodies at each level is reserved for women. Thus, a forum for participation for women is ready which is undoubtedly an honest effort in the direction of women empowerment. In this context it was said that this provision will change the whole world of half the population of the hidden in the veil. But there are huge challenges before it, because this initiative gave the pen for women but it does not come to be written. Indian society believes in patriarchy, which is based on biological determinism. According to biological determinism, higher-lower determination occurs naturally, and some groups are superior and better than others.

This ideology is responsible for the gender-based division of labor. The gender-based division of labor differentiates between public and private work. In addition, it makes women responsible for public works and for women (for domestic tasks). Due to these personal actions, women cannot participate in the public sector. Apart from this, India's historic feudal mindset is also a hindrance to the participation of the subconscious classes. Traditionally, there has been a trend prevailing in India, which still persists in rural areas.

Although women make candidates in the elections due to the reservation system, but often this lady candidate does not demand votes or leads to leadership on political forums because it is a public work, whose responsibility is entrusted to the traditions by men. The

men also determine who the women of the family will vote for. In addition, the power of decision making of elected women representatives is also used by men.

Thus, due to the concept of 'Sarpanchapati', the elected women representative becomes a 'signature machine'. On the other hand, low level of illiteracy, awareness and financial status is also a hindrance in the inclusion of women. It is worth mentioning that the existence of the people's building is hindered on the foundations of awareness. But now the question arises, what kind of awareness will inspire real public participation?

In this connection, Gandhi Darshan seems more closely related to reality that it is a fundamental condition to fulfill the need for political awareness of those who are marginalized on the margins. Thus, economic awareness drives economic awareness. On the other hand, social-cultural awareness also has its own importance in this regard.

It promotes the inclusion in politics on the one hand, the same class and the discrimination of the character of the character. Hence, the issue of political participation and empowerment of women cannot be limited to political rights more. In the past years, women have played an effective role in Panchayats through the process of empowerment of women. Demand for social conversion for feminists' self-determination and self-rule has strengthened in the present creative society.

It was expressed in the Parliament of India as the 110th and 112th Constitution Amendment Bill, 2009, which was related to increasing the 33 per cent seats for women in all levels of Panchayatiraj and urban bodies, respectively, to 50 per cent. However, both the bills ended with the 15th Lok Sabha dissolution. Despite this, states such as Bihar, Himachal Pradesh, Uttarakhand, Rajasthan and Kerala have ensured 50 percent representation of women in institutions of local self-government, which is an exemplary initiative in the direction of women empowerment.

Although changes in the practical role of women in panchayats are clearly reflected, whose expression is reflected in 36.84 percent of the women in Panchayati Raj institutions of all levels. In this, the government is constantly trying to make positive changes, but only statutory efforts are not enough.

Hence, for the political participation of women 'two-dimensional strategy may be expected, in which' both statutory and ideological columns stand in stability. In this context, a systematic program of the Central Government, 'Panchayat Mahila and Youth Shiksha Abhiyan' is remarkable, which is being implemented by the Ministry of Panchayati Raj. The objective of this scheme is to create confidence and ability through

elected campaigns of elected women representatives so that they can discharge the active and effective role in self-governance. In this campaign, training is given for the solidarity and capacity building between elected women representatives through activities.

Also, while participating in public meetings, control of hesitation is also a part of this campaign. But this scheme cannot be implemented better without the active and positive role of the civil society, because media, voluntary organizations and cooperative societies can play an important role in enabling participation politics. In the end, there is a need to work equally at both statistically and ideological levels. The law cannot eliminate structural inequality, but they can promote social change. We need to be aware of the culture of equality for achieving a just society, then the elected women representatives will be able to convert from 'signature machine' into a prudent leader.

It is a matter of great joy that 15 states of the country have increased the women reservation in Panchayati Raj institutions from 33 percent to 50 percent. It is a solid positive step in terms of increasing women's activism in politics. However, only the growing number of elected women representatives will not empower women.

The need of the hour is that they should have proper training arrangements, take steps to increase their confidence, promote their ambitions and participation, and provide them with opportunities to make their independent identities. Many female Panchayat representatives have proved by their activity and concrete actions that they are far ahead of men in giving efficient leadership.

There is a deep connection between decentralization and inclusive growth. The main purpose of inclusive development is to make citizens realize that they are an important part of the policy making process in the country without any discrimination with their gender, caste, religion or place of residence. With this sentiment, the 73rd Constitution Amendment Act was implemented on April 24, 1993.

Through this, constitutional clearances were given to the establishment of democracy at the grassroots level in villages like national and opinion level. Over the years, the emphasis was on improving the condition of the people of the Scheduled Castes and Scheduled Tribes and other weaker sections of the people who were neglected and exploited in Article 243 (D) of this Act for years. Arrangements were made to provide one-third reservation to women in Panchayati Raj Institutions.

Problems and Challenges

It was hoped that entry of women in panchayats would not only be their personal, social

and political empowerment but also quality and quantitative improvement in politics as women's views, understanding, issues and challenges would be central pivot. Patriarchal culture and social structure dominated by the rural areas have been obstructing women's involvement in local government.

Some families prevent their women from working in panchayats by reasoning that the real place of women is home, not panchayat office. In many cases, husbands of women Panchayat members use them as their pawn. This started the 'head husband' or 'sarpanch husband'.

In some cases, the wife works most of the panchayat inside the village, but Husband handles the work related to Panchayat outside the village. In this process, when husbands see that other 'sage husband' is making a pawn to his wife, then they also adopt similar juggle.

Institutional restrictions can be imposed on women Panchayat representatives in various ways. In some cases, men conspire to remove women from power. Sarpanch can be made through any women's reservation, but there are generally sub-panchank men. He makes an alliance with the other members and passes an unbelief motion against him and begins to act as Sarpanch.

The rotation system of reservation is also against women's interests. For women, one-third seats are reserved in the Panchayati Raj institutions, but under the rotation system, different constituencies are reserved for them by unregistered women seats in the next elections. Before this, the elected woman representative in the election has to fight the men and women candidates in the next elections, contest the elections in the next elections, or contest the reserved constituencies from the reserved constituency.

In the new constituency, he does not get the benefit of his good work done in the old constituency. That is, they have to start a new one. Most government officials prefer to participate in meetings by elected lady representatives because they feel comfortable working with men. A woman base center based in Pune has found that only 55 percent of women representatives in Maharashtra participate in the meetings.

Families help women in elections, but after the election they do not cooperate with their actual work. Sometimes women are discriminated with the place of seating in Panchayat meetings. They are placed apart from men or on the floor, while men sit on the chair. Many times, it has been seen that the candidate is a wife, but husband's name and picture are given prominence in the banner of election campaign.

Many female representatives are illiterate, so they do not know the rules and procedures. Especially those officers who take advantage of uselessly, who make records and accounts. Thus, a large number of elected women representatives are facing dual problems because they can not exercise their rights in the Panchayat, while at home they have a weak position. Lack of training, information and social support, and frequent changes in the laws and procedures become a major obstacle in their work.

Another problem is the neutral attitude of political parties to strengthen the village panchayats at ground level. MPs and MLAs consider Panchayat representatives in their area as a threat to their growing popularity, which is why they do not want to let them move forward. Suggestions: Here are some suggestions for better participation of women in Panchayati Raj Institutions, which will prove useful in terms of their empowerment.

Suggestions

1. It is necessary to make changes in the perception of women and women towards women. The work of women is not just for the care of the household and the child, but the men and women are equally partners in the socio-economic-political sphere. Through this education should spread awareness among both men and women.
2. Promote dialogue between literate and illiterate women in rural areas. Arrangements should be made to communicate illiterate or under-literate women in urban areas and communicate with educated women there.
3. Encourage women participation at all levels of Panchayat. This will not only inspire confidence in them, but also will enhance leadership skills. Minimum attendance of women members should be compulsory from the Gram Panchayat to the Zilla Parishad.
4. Women should be encouraged to be organized themselves. Women's organizations can play an important role in promoting women's involvement in social and political activities. Financial assistance and structural facilities should be provided to such women organizations by the government.
5. Many women members have played an active role in Panchayati Raj Institutions in different areas of the country, have done well in education, health and development. Such kind of women should be advertised for the honorable leadership and they should be publicly honored. This will inspire other women.

6. Media can play a major role in bringing about change in rural society. Awareness should be spread in rural society by giving news and analysis of gender equality and gender justice.
7. In order to create gender sensitivities among primary, secondary and higher secondary students, the curriculum should be reasonably amended.

Conclusion

It is a great thing that the reservation for women in panchayats has been increased from 33% to 50%. It is a solid positive step in terms of increasing women's activism in politics. However, only the growing number of elected women representatives will not empower women.

It is very needed that women should be given proper training so that they can perform their role very well in the changed scenario. The training should be so given that take steps to increase their confidence, promote their ambitions and participation, and provide them with opportunities to make their independent identities. Many female Panchayat representatives have proved by their activity and concrete tasks that they are far ahead of men in giving efficient leadership. It should be an inspiration for other women.

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A Study to Examine the Impact of Apparel Website Attributes on Impulse Purchase in Gwalior region

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Abstract

This study has been conducted to find out the effect of Apparel website attributes on impulse purchasing. The traditional stores have already been studied a lot in different contexts. Now the need of the hour is to conduct researches on online marketing and to find out the different factors that induce the consumer to do online shopping. The increasing excitement among the consumers to do online shopping of the apparels mandates the need of the present research. The research was conducted in Gwalior city taking a sample of 200 respondents. ANOVA was applied to find out the effect of website attributes on impulse buying. The results indicate that as such in India there is no effect of website attributes on impulse buying which is contrary to the results obtained in researches conducted in western countries.

Keywords: Apparel Website Attributes, Impulsive Purchase, etc.

Conceptual framework for the study

Impulse Purchase

According to Rook (1987) Impulse buying can be often powerful and persistent urge to buy something immediately. The concept of impulse buying in the traditional shopping stores is already observed and studied by many researchers, but the concept of online impulse purchases is still to be studied in the city like Gwalior (India).

The basic is that the person who feels that the products available in the traditional stores do not match his needs as well as he does not feel himself as equal to the person who is living in any metro city like Mumbai where they can buy any product of any brand. This shopping curiosity has pushed the concept of online shopping in city like Gwalior. Stern (1962) indicates that impulse buying is synonymous with “unplanned buying” and defines it as “any purchase which a shopper makes but has not planned in advance. Beatty and Ferrell (1998) extended Rook's definition of impulse buying to “a sudden and immediate

purchase with no pre-shopping intentions either to buy the specific product category or to fulfill a specific buying task.

Apparel Website/ Online Stores

Apparel website can be defined as the website that offers various range of apparel available for purchase in variety of colors, sizes and at a displayed price. The range of products or apparels are displayed on the site with a facility to view them according to the required size or desirable color. The website also provides the close view facility through which the designs, colors, pattern, stitching along with the quality of fabric can be seen carefully before ordering. There are many sites like jabong, bibaonlinestore, firstcry, flipcart, fitise, etc which offer apparel of various brand under one click. There few online stores that are into traditional selling also along with online stores. It's not only designed to sale apparel but along with this items like jewelry, handbags, cosmetics, toiletries, footwear's, baby products and the list is endless that is provided by such sites. The customer sitting even in a small town can purchase the product being sold by any country.

Literature Review

Impulse buying can be defined as “a sudden, often powerful and persistent urge to buy something Immediately” (Rook, 1987, p.191). Unplanned or unintended purchasing has been commonly associated

with impulsive purchasing by many researchers, and an unplanned purchase is necessary for categorizing a purchase as impulsive. LaRose (2001) stated in his study that various features like product recommendations, suggested items, price point categories, notice of sales that are reflected on the website also supports the unplanned buying.

Koski (2004) mentioned in her study five features of online websites that encourage impulse buying shopping. According to the study first advantage, website shopping keeps the shopping of buyer very secret and thus it's not being disclosed to any. So, the buyer can shop whatever he wants. Secondly Along with the secrecy it provides easy access and anytime he can shop even at night or it's a holiday. Koski also mentioned the availability of variety on internet as the third feature. Fourth, direct marketing and personalized promotions lead consumers to impulsively buy. Lastly, consumers can use credit cards online which encourages impulse purchases. As the online store or website shares few common features with traditional stores. Stern (1962) has given us a list of few factors that influence the buying impulse in traditional stores such as low prices, mass distribution, self-service, mass advertising, prominent store displays, low marginal need for an item,

short product life, smaller sizes or lightweight, and ease of storage. Koufaris (2002) studied consumer behavior in the online environment from the perspective of how emotional and cognitive responses to visiting an online store for the first time influence the shopper's intention to return and their likelihood to make unplanned purchases. Although they were able to conclude that shopping enjoyment and perceived usefulness of the site were predictors of the consumer's intention to return, their results on unplanned purchases were not conclusive.

Objective

- To develop and standardize the questionnaire to measure cues on apparel website.
- To develop and standardize the questionnaire to measure impulse purchase.
- To find out the impact of cues on impulse purchases
- To evaluate the cues on apparel website and impulse purchases on the basis of gender.
- To evaluate the underlying factors of Apparel cues on apparel website
- To evaluate the underlying factors of Impulse Purchases.
- To open new vistas for future researches.

Research Methodology

The study was causal in nature with survey method used as a tool for data Collection. The Population for the study included all the customers. Both male and female respondents were included. Sampling size for the study was of 200 respondents. Non-probability sampling technique was used to select sample. Self-designed questionnaire based on Likert type scale from 1 to 5 where 1 shows the minimum agreement and 5 indicates maximum agreement was used. Item to total correlation was applied for checking the internal consistency of the questionnaire. Reliability test was used for checking the reliability of the questionnaire. Regression was applied to find out the impact of Apparel Website features on Impulse Purchase Factor analysis was used for analyzing the underlying the factors of Apparel Website and purchase intentions. ANOVA was applied to find out the gender and age differences in the study

Hypothesis

H₀1: There is no significant effect of cues on apparel website on impulse purchases

H₀2: There is no significant effect of gender on both the variables.

Result and Discussion

1. Item to total correlation: Firstly, consistency of all the items in the questionnaire was checked through item to total correlation. Under this correlation of every item with total was measure and the computed was compared with standard value (0.1379). If the computed value was found less, then item was dropped and termed as inconsistent. In this table all the items were accepted.

Table 1. Consistencytable: Apparel Website Attributes

S.No	Item	computed correlation value	consistency	accepted/dropped
1	Good Product assortment available	.424	consistent	accepted
2	Regular announcement of sale on website	.457	consistent	accepted
3	Number of national brand offered	.326	consistent	accepted
4	Number of international brands offered	.403	consistent	accepted
5	Easy Payment methods	.228	consistent	accepted
6	Trouble free Shipment terms	.286	consistent	accepted
7	Number of Colors available of apparel	.326	consistent	accepted
8	apparelavailable in many Sizes	.388	consistent	accepted
9	Genuine Delivery time	.383	consistent	accepted
10	Comfortable Delivery hours	.252	consistent	accepted
11	Presence of Toll free number	.409	consistent	accepted
12	Presence of Customer care unit	.145	consistent	accepted
13	Fair Purchase/Return policy	.276	consistent	accepted
14	Fair Purchase exchange policy	.356	consistent	accepted
15	Availability of Live chat	.445	consistent	accepted
16	Quality Provided as promised	.385	consistent	accepted
17	Presence of Feedback of current customers	.376	consistent	accepted
18	Transparent Suggestion and complaint system	.378	consistent	accepted
19	Connectivity with various networking sites	.272	consistent	accepted
20	Privacy policy	.351	consistent	accepted
21	Availability of Happy Customer reviews	.471	consistent	accepted
22	Facility of on call booking	.209	consistent	accepted
23	Option of Roll over image facility to magnify	.280	consistent	accepted
24	Facility of Order confirmation through SMS / MAIL/ CALL	.349	consistent	accepted
25	Membership discounts present	.230	consistent	accepted

Table 2. Consistency table: Impulse Purchase

S.No	Item	computed correlation value	consistency	accepted/dropped
1	Feel a sense of excitement when I make an online purchase.	.384	Consistent	Accepted
2	have difficulty controlling my urge to buy when I see a good offer online	.651	Consistent	Accepted
3	I see a good deal, I tend to buy more than that I intended to buy	.593	Consistent	Accepted
4	I many a times forget to buy what I was actually looking for online	.571	Consistent	Accepted
5	can afford to make any unplanned purchases	.578	Consistent	Accepted
6	do not generally make a shopping list in case of online shopping	.525	Consistent	Accepted
7	I always buy if I really like it.	.662	Consistent	Accepted
8	see something that I think I need, I buy it even though I was looking for other products.	.561	Consistent	Accepted
9	I feel like I'm exploring new worlds in shopping.	.386	Consistent	Accepted

Reliability Measure

Cronbach alpha method has been applied to calculate reliability of all items in the questionnaire. Reliability test using SPSS software and the reliability test measures are given below: Cronbach's Alpha (Apparel Website Attributes) =0.716 and for customer retention is 0.790.. It is considered that the reliability value more than 0.70 is good and it can be seen that in statistics, reliability value was quite higher than the standard value, so all the items in the questionnaire are highly reliable. Validity of the questionnaire was checked through face Validity method and found to be very high.

Factor Analysis

KMO Bartlett's Test was applied to find out the adequacy of the sample and the significance value was .000 which is less the standard value.

Table 3.KMO and Bartlett's Test

Kaiser -Meyer -Olkin Measure of Sampling Adequacy.		.658
Bartlett's Test of Sphericity	Approx. Chi -Square	607.940
	Df	300
	Sig.	.000

Table 4. Factor analysis of Apparel Website Attributes

Factor No.	Eigen Value	Factor Name	Variable No.	Variable Convergence	% of Variance	Loading
1	1.760	Policies and message	13	Fair Purchase/Return policy	7.040	.752
			15	Availability of Live chat		.589
			11	Presence of Toll free number		.431
			21	Availability of Happy Customer reviews		.431
2	1.750	Assortment and announcements	1	Good Product assortment available	7.001	.760
			2	Regular announcement of sale on website		.745
3	1.656	Variety and delivery	8	apparel available in many Sizes	6.626	.628
			7	Number of Colors available of apparel		.610
			9	Genuine Delivery time		.569
			10	Comfortable Delivery hours		.491
4	1.532	Payment and brands	4	Number of international brands offered	6.129	.719
			5	Easy Payment methods		.691
5	1.448	Verification	23	Option of Roll over image facility to magnify	5.794	.733
			24	Facility of Order confirmation through SMS / MAIL/ CALL		.730
6	1.419	Privacy	3	Number of national brand offered	5.674	.688
			20	Privacy policy		.518
7	1.418	Customer care and shipment	12	Presence of Customer care unit	5.674	.689
			6	Trouble free Shipment terms		.689
			22	Facility of On call booking		.669
8	1.403	Offers and suggestions and complain	25	Membership discounts present	5.614	.758
			18	Transparent Suggestion and complaint system		.469
9	1.366	Publicity	19	Connectivity with various networking sites	5.465	.780

Discussion of factors

1. **Policy & message:** A "policy" is very much like a decision or a set of decisions, and we "make", "implement" or "carry out" a policy just as we do with decisions. Like a decision a policy is not itself a statement, nor is it only a set of actions, although, as with decisions, we can infer what a person's or organization's policy is either from the statement he makes about it, or, if he makes no statement or we don't believe his statement from the way he acts. But, equally, we can claim that a statement or set of actions is misleading and does not faithfully reflect the "true" policy. And message is a communication (usually brief) that is written or spoken or signaled.
2. **Assortment and announcement:** Assortment refers to "a collection or quantity of things distributed into kinds or sorts; a number of things assorted". And Announcements refers to "Statement made formally and publicly to the press for This factors has received the highest Eigen Value i.e. 1.760 and four statements are clubbed under this factor. Mass distribution". It has received the eigen value of 1.750
3. **Variety and Delivery:** The quality or state of being various and the act of delivering up or over; surrender; transfer of the body or substance of a thing; distribution .it has received the Eigen value of 1.656
4. **Payments and Brands:** act of paying, or giving compensation; the discharge of a debt or an obligation. An identifying symbol, words, or mark that distinguishes a product or company from its competitors. Usually brands are registered (trademarked) with a regulatory authority and so cannot be used freely by other parties. For many products and companies, branding is an essential part of marketing. it has received the Eigen value of 1.534
5. **Verification:** it has received the Eigen value of 1.448 and it means Comparison of two or more items, or the use of supplementary tests, to ensure the accuracy, correctness, or truth of the information.
6. **Privacy:** Parent (1983) has defined privacy as the absence of undocumented personal knowledge. It has received the Eigen value of 1.419
7. **Customer care and shipment:** It has received the Eigen value of 1.418
8. **Offers and Suggestions:** It has received the Eigen value of 1.403
9. **Publicity:** publicity is the simple act of making a suggestion to a journalist that leads to the inclusion of a company or product in a story. It has received the Eigen value of 1.336

10. Quality and Feedback: ISO 8402-1986 standard defines quality as the totality of features and characteristics of a product or service that bears its ability to satisfy stated or implied needs. it has received the Eigen value of 1.310

KMO Bartlett's Test: Impulse Purchase

KMO Bartlett's Test was applied to find out the adequacy of the sample and the significance value was .000 which is less the standard value.

Table 5: KMO and Bartlett's Test

Kaiser -Meyer -Olkin Measure of Sampling Adequacy.		.716
Bartlett's Test of Sphericity	Approx. Chi -Square	291.999
	Df	36
	Sig.	.000

Table 6 : Factor analysis of impulse purchase

Factor No.	Eigen Value	Factor Name	Variable No.	Variable Convergence	% of Variance	Loading
1	2.068	Readiness	3	When I see a good deal, I tend to buy more than that I intended to buy	22.981	.809
			5	can afford to make any unplanned purchases		.608
			6	do not generally make a shopping list in case of online shopping		.756
			7	always buy if I really like it.		.571
			2	have difficulty controlling my urge to buy when I see a good offer online		.525
2	1.517	exhilaration	1	feel a sense of excitement when I make an online purchase.	16.855	.819
			4	many a times forget to buy what I was actually looking for online		.548
3	1.490	Hasty	8	If I see something that I think I need, I buy it even though I was looking for other products	16.552	.757
			9	feel like I'm exploring new worlds in shopping.		.741

Discussion of factors

1. **Readiness:** A state of preparedness of systems organizations and persons to meet a situation and carry out a planned sequence of actions. Readiness is based on thoroughness of the planning, adequacy and training of the personnel, and supply and reserve of support services or systems. This factor has received the highest Eigen Value i.e. 2.068 and five statements are clubbed under this factor.
2. **Exhilaration:** The act of enlivening the spirits; the act of making glad or cheerful; a gladdening. This factor has received Eigen Value 1.517.
3. **Hasty:** Hasty can be described as excessively or rashly quick. This factor has received the lowest Eigen Value i.e. 1.490

Table 7: Regression results

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.008 ^a	.000	-.005	5.54372
a. Predictors: (Constant), appweb				
b. Dependent Variable: impbuy				

Table8: Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	34.594	3.184		10.866	.000
	Appweb	.004	.039	.008	.113	.911
a. Dependent Variable: impbuy						

Table 9: ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.389	1	.389	.013	.911 ^a
	Residual	6085.111	198	30.733		
	Total	6085.500	199			
a. Predictors: (Constant), appwebatt						
b. Dependent Variable: imppur						

$$Y = a + bx + e$$

$$Y = 34.594 + .004 \text{ Appwebattri} + e$$

Y= Impulse Purchase (dependent variable)

X= Apparel website Attributes (independent variable)

e = error

The value of adjusted R square is .005 that indicates Apparel website attributes explains 5 % variance in dependent variable Impulse Purchase. In other words, it indicates Apparel website attributes contribute 5 % to Impulse Purchase.

The model used for regression has good fit as indicated by F-value 0.013 which is significant at 0.911 level of significance indicating a low predictability of model.

The relationship between Apparel website attribute as independent and Impulse Purchase as dependent variable is indicated by standardized coefficient Beta with a value of 0.008. The significance of beta is tested using t-test and value for t is 0.113 which is significant at 0.911 level of significance indicating insignificant relationship between Apparel website attribute as independent and Impulse Purchase as dependent variable

ANOVA Results for Apparel Website Attributes

Table 10: Levene's Test of Equality of Error Variances^a

Dependent Variable:appweb			
F	df1	df2	Sig.
1.561	4	195	.186
Tests the null hypothesis that the error variance of the dependent variable is equal across groups.			
a. Design: Intercept + age + gen + age * gen			

Table 11: Tests of Between-Subjects Effects

Dependent Variable: appweb					
Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	378.679 ^a	4	94.670	.930	.448
Intercept	162884.164	1	162884.164	1.599E3	.000
Age	100.109	2	50.055	.491	.612
Gen	9.642	1	9.642	.095	.759
age * gen	164.695	1	164.695	1.617	.205
Error	19859.196	195	101.842		
Total	1334869.000	200			
Corrected Total	20237.875	199			
a. R Squared = .019 (Adjusted R Squared = -.001)					

Table 12: Post Hoc Results

Multiple Comparisons						
Appweb Tukey HSD						
(I) age	(J) age	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1	2	-1.8278	1.75432	.551	-5.9711	2.3154
	3	5.2436	7.18149	.746	-11.7173	22.2045
2	1	1.8278	1.75432	.551	-2.3154	5.9711
	3	7.0714	7.30382	.598	-10.1784	24.3212
3	1	-5.2436	7.18149	.746	-22.2045	11.7173
	2	-7.0714	7.30382	.598	-24.3212	10.1784
Based on observed means.						
The error term is Mean Square(Error) = 101.842.						

ANOVA For Impulse Purchase**Table 13: Levene's Test of Equality of Error Variances ^a**

Dependent Variable: impbuy			
F	df1	df2	Sig.
.753	4	195	.557
Tests the null hypothesis that the error variance of the dependent variable is equal across groups.			
a. Design: Intercept + age + gen + age * gen			

Table 14: Tests of Between-Subjects Effects

Dependent Variable:impbuy					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	124.024 ^a	4	31.006	1.014	.401
Intercept	28964.121	1	28964.121	947.417	.000
Age	74.131	2	37.066	1.212	.300
Gen	62.070	1	62.070	2.030	.156
age * gen	6.762	1	6.762	.221	.639
Error	5961.476	195	30.572		
Total	250386.000	200			
Corrected Total	6085.500	199			
a. R Squared = .020 (Adjusted R Squared = .000)					

Table 15: Post Hoc Results

Multiple Comparisons						
Impbuy Tukey HSD						
(I) age	(J) age	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1	2	1.0321	.96118	.532	-1.2380	3.3021
	3	3.1987	3.93469	.695	-6.0940	12.4915
2	1	-1.0321	.96118	.532	-3.3021	1.2380
	3	2.1667	4.00172	.851	-7.2844	11.6177
3	1	-3.1987	3.93469	.695	-12.4915	6.0940
	2	-2.1667	4.00172	.851	-11.6177	7.2844
Based on observed means.						
The error term is Mean Square(Error) = 30.572.						

The overall model fit was evaluated using F Test having value of 0.930, which was significant at 0.441 level of significance, indicating that the model has low fit. The effect of Apparel Website Attributes was evaluated on Impulse which was found to be significant at 0.911 level of significance. But the gender and age do not have any significant Effect on Apparel Website Attributes neither individually nor collectively as the value was found insignificant at 0.095 and 0.491 respectively sand in case collective significance value was 1.617

The gender and age do not have any significant Effect on Impulse Purchase neither individually nor collectively as the value was found insignificant at 1.212 and 2.030 respectively and in case collective significance value was 0.221

The result of Post Hoc shows that the three categories of age do not have any significant effect on each other on. As we can see in the Post hoc Table in case on apparel website attributes the value of significance of Group one on second is 0.551 and on third is 0.746, of second on first is 0.551 and on third is 0.598 and of third on first is 0.746 and second is 0.596 which is insignificant.

Similarly, the result of Post Hoc shows that the three categories of age do not have any significant effect on each other on. As we can see in the Post hoc Table in case on Impulse Purchase the value of significance of Group one on second is 0.532 and on third is 0.695, of second on first is 0.532 and on third is 0.851 and of third on first is 0.695 and second is 0.851 which is insignificant.

Implications

This study is a useful contribution towards Apparel websites for increasing their performance. This study can be used by different researchers for further research. This study is a useful contribution to understand the importance of Apparel websites attributes to Impulse Purchase. It will help Hotels in knowing the parameters on which Apparel Websites Attributes t and Impulse Purchase can be evaluated. This study can be useful contribution towards Apparel websites in analyzing their service quality and determining the areas where they can improve.

Suggestions

The study has been done by taking only a sample of 200 respondents therefore it is suggested to take bigger sample size in order to obtain more accurate results. The study has been done in Gwalior region only so it is suggested to take larger area or other region so that more appropriate results can be obtained. The study resulted in the fact that apparel website attributes and impulse purchase has insignificant relationship. Similarly effect of apparel website attributes can be evaluated on other variables. The research on impact of Website Attributes its impact on Impulse Purchase can also be conducted in other sectors.

Conclusion

This study examined the impact of Apparel Website Attributes on Impulse Purchase in Gwalior region. The questionnaires were filled by service users of various users in Gwalior and by applying test like validity, reliability, factor analysis and regression. It has been concluded that there is no impact of Apparel website attributes on Impulse Purchase in Indian context. Various Studies for the same variables have been conducted in many countries but the results received in the Indian context is quite surprising. There may be various reason for these results. India is still lacking behind in computer literacy that's why there is no significant impact of website attributes are found on Impulse Purchase. But from the study it can be hoped that as computer literacy rate would go up the result may change.

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Agricultural Financing by Commercial Banks – Problems Faced by Farmers

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Abstract

In Indian economy, the agriculture sector growth is lagging behind (3.0%) in comparison to industry sector (7.1%) service sector (10%). Development of agriculture sector is vital for economic growth and development. Adequate finance is a panacea for this. Presently under priority sector, Govt. and RBI are guiding to commercial banks channelizing more and more funds to farmers at easy terms. In institutional finance to agriculture, commercial banks including RRBs now are emerging in top ranking. Most importantly the role of money lenders is decreasing and reaching near bottom level. There is a sigh of relief for the rural poor from the dreaded clutches of money lenders. NABARD as apex institution of indirect financing to agriculture is providing patronage as philosopher, guide and friend. The progress achieved by NABARD in refinancing is praiseworthy. Recent data reveals that 66% households in rural area are still away from getting banking services and facilities at cheaper cost. Financial inclusion is the need of hour. Commercial banks are extending financial inclusion in rural areas directly hitting poverty alleviation in India. Though financing of agriculture by commercial banks has proved its value in changing the economy of farmers by increasing their income yet the system is not free from some problems. This research study (paper) is an attempt to find the problems faced by farmers and suggest some framework changes regarding problems and sound financing system for the near future.

Keywords: Institutional finance, Priority Sector, Financial inclusion, Money lenders, Poverty Alleviation, etc.

Introduction

Developing countries like India still have dominance of agriculture in their economy in terms of revenue generation as well as manpower employment. About 60% population engage in agriculture in India contributes 18% of GDP whereas the developed countries get only 2% of their GDP from agriculture. About 10% of the national exports originate in this sector it shows clearly that economic growth and development of India is closely tied to the development of agriculture. The agriculture sector, as such has been growing at a

relatively low rate in comparison to other sector of the economy. Following data (Table No. 1) shows the sector wise growth rate of economy

Disguised unemployment and low productivity is the negative feature of this sector. Credit plays a vital role for the development of agriculture. As this sector generates low income or surplus due to increasing cost of inputs and implements. It results, Indian agriculture a way of sustenance not a surplus yielding work. Use of technology and high yielding varieties of seeds is still cry for mars for marginal and small farmers. Credit needs is beneficiary for all types of farmers. However, it is inevitable for small and marginal farmers which constitute 78% of the total farmers. Small farmers having held less than two hectares and marginal farmers having held less than 1 hectares. Economy of Indian farmer is dualistic where existence of two different segments. One segment of the economy is developed, makes use of modern technique of production and is usually market oriented and have a few problems regarding bank finance. The other segment is subsistence type of economy that makes use of primitive methods of production and has lot of problems in financing agriculture credit.

Agricultural credit or finance needs can be classified in three categories:

- **Short term:** This type of finance is available/desired for purchase of pesticides and payment of wages and operational expenses. This type of need is mostly required by all farmers.
- **Medium term:** This type of finance is available/desired from fifteen months to five years for the purchase of cattle, small agricultural implements, repairs and constructional wells etc
- **Long term:** This type of finance is available/desired for the permanent improvement on lands, digging tube wells, purchase of larger agricultural implements and machinery like tractor, harvesters etc. and repayment of old debts. The period of such credit extends beyond 5 years. Commercial banks provide two types of loan i.e. crop loan and investment loan. Crop loan is a short-term loan, stands due for repayment immediately after the harvesting of the crop whereas investment loan is a long-term loan required for the purposes of capital formation on land.

Sources of agricultural credits

The various sources of agricultural credit can be classified in two groups.

- **Non- Institutional Agencies:** this include the local village money lender and their agents and landlords.
- **Institutional Agencies:** this includes cooperatives societies, commercial banks regional rural banks and NABARD. Table No.2 shows sources of agricultural credit (see appendix).

Policy developments in respect of agricultural credit

Government and RBI views in respect of agricultural credit policy, can be divided into two phases

- 1) **Period before 1970:** Before 1970 the government was committed to the exclusive development of cooperatives as major source of institutional credit in rural areas. This period is called cooperative period.
- 2) **Period since 1970:** Two major developments occurred; the first was the green revolution in the wake of adoption of the new agricultural technology. The second was the nationalization of 14 major commercial banks in July 1969(six more commercial banks were nationalizing in April 1980). Multi agency Approach (MAA) was started regarding agricultural and rural credit. Commercial banks begin to participate with full heart in agriculture finance. Two new institutions known as regional rural banks and the farmers service societies were also establish during this period. The following table no.3 shows the share of commercial banks and Cooperatives in India.

Review of Literature

Singh (1989) 17 by their analysis found out that marginal farmers constitute 71 percent of the total defaulters and accounts for 73 percent of the total overdues whereas small and medium farmers together account for 29 percent of the total defaulters and about 27 percent of the total overdues. Out of the total overdues about 32 percent were 'old' overdues for over 3 years and 68 percent current overdues for less than 3 years. The slackness in timely recovery by bank is the most important reason for willful default. Diversion of income for purchasing land and other property, political influence were the other factors for willful default. The factors like low crop yield, high price of input and more domestic expenditure is affecting the repaying capacity of even the farmers who is willing to repay

Sahoo (1991) A study namely 'Management of commercial Banks in India' was

undertaken by S.K. Sahoo and S.C. Sahoo in 1991 on the role of one DCCB in Orissa mobilizing deposits and lending, problems of overdues and recovery management and the evaluation of managerial and financial efficiency. They found that the inefficient management of the sample bank had become the crux of all the beneficiaries. For an all-round working of the bank, the management has to be improved first. Once the bank, including its branches and societies, is equipped with adequate trained man power they will be able to handle effectively the various banking functions such as deposit mobilization, sound financing, effective collections of overdue etc. An improvement of managerial efficiency will definitely lead to a better utilization of working capital.

Objectives of the Study

1. To study and review the present institutional agricultural credit setup in India.
2. To study the role and performance of commercial banks financing agriculture.
3. To identify the problems faced by farmers in getting agricultural finance by commercial banks.
4. To review the present multi institutional approach of agriculture in India.
5. Based on micro level study (sample area), suggest some new ideas and changes for planning.

Research Design and Methodology

Primary data are collected through Questionnaire from Sample area. Purposive discussion with bank staff is conducted regarding problems and remedial measures. Secondary data from various committees reports RBI bulletin are collected from our research point of view.

A sample unit of 60 borrowers from sample area (Ujjain Division) financed by bank of Ujjain is collected and this unit is further stratified in small, medium and big farmers in the ratio of 3:2:1. weightage is given according to their numbers in universe(total). Borrower farmers through questionnaires were asked about some problems mentioned in questionnaires to answer with preference order. Collected data are classified and tabulated and result is presented in tabular form.

Analysis and Interpretation of Data

Data received through questionnaire are analyzed in three categories A. Problems of marginal and small farmers B. problems of medium farmers C. problems of big farmers. Almost all marginal and small farmers responded about problems and their high rank

problems are – high rate of interest on loan, lack of financial knowledge about bank products and plans and cumbersome process of getting loans and lack of security and collateral. Medium farmers responded their problems rank wise as cumbersome process of getting loan, lack of financial knowledge and high rate of interest. Bank staff is not cooperative it is also reported by this group. Responded top problems of big farmers are as – cumbersome process of getting loan, bank staff is not cooperative, lack of financial knowledge and high interest rate. Some common problems faced by all the three groups of farmers are cumbersome process of getting loan, high rate of interest and bank staff is not cooperative. Table No.4 (see in appendix), shows problem faced by farmers.

Suggestions and Conclusion

There are many studies are in vogue at macro level on agricultural finance by commercial banks but study at micro level about problems faced by farmers is out of vogue and need of the time for realistic approach. The present study is an attempt in this regard and will serve a base for future policy makers. All types of farmers have responded high interest rate and cumbersome process of getting loan. policy makers should simplify the procedure of agriculture credit, interest rate for marginal and small farmers should be reduced and about problem of lack of cooperation by bank staff,--training college of bank staff should provide compulsory rural oriented training. Education about financial knowledge (financial inclusion) to marginal and small farmers be spread through NGOs and educational institutions. Role of government should strictly be adhesive to infrastructure development like road, transport, irrigation and electricity Micro financing (bank linkage) is a right step for financial inclusion. Recovery process of loan must be elastic and based on reality. Fear factor about recovery process of bank amongst rural poor should be reduced through education and image of bank be presented in rural society as friend, philosopher and guide.

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Table1: Year on year growth rate in percent

Annual rates	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
Agriculture	5.1	4.2	5.8	-0.1	0.4	6.6	3.0
Industry	9.7	12.2	9.7	4.4	8.0	7.9	7.1
Services	11.0	10.1	10.3	10.1	10.1	9.4	10.0
Non-agriculture	10.5	10.8	10.1	8.2	9.4	8.9	9.0

Table 2: Sources of agricultural credit (In %)

Source	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
Government	3.3	2.6	3.6	4	6.1	3	4
Cooperative societies	3.1	15.5	22.7	28.6	21.6	26	24.9
Commercial banks	.9	.6	4.0	28	33.7	27	43.1
Moneylenders	90.9	67.4	68.4	38.8	32.7	41	21.9
Others	1.8	13.9	1.3	.6	5.9	3	6.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Report of the all India rural credit review committee 2014, RBI bulletin and NSSO, May 2016, Economic Survey 2015-16

Table 3: Relative share of commercial banks and cooperatives (%)

Year	Co-operatives	Commercial Banks	Regional Rural
2006-07	100.0	-	-
2007-08	61.6	38.4	-
2008-09	49.0	47.6	3.4
2009-10	39.4	52.6	8.0
2010-11	38.0	54.1	7.9
2011-12	34.1	57.2	8.7
2012-13	31.0	60.3	8.7
2013-14	25.0	65.0	10.0
2014-15	21.8	69.7	8.5
2015-16	19.6	71.8	8.6

Source: Economic survey of India

Table 4: Problem faced by marginal, Medium and Big Farmers (Rank wise)

Marginal Farmers	Rank	Medium Farmers	Rank	Big Farmers	Rank
High rate of interest on loan	1	Cumbersome process of getting loan	1	Cumbersome process of getting loan	1
Lack of financial knowledge	2	High rate of interest on loan	2	Bank staff is not cooperative	2
Cumbersome process of getting loan	3	Lack of financial knowledge	3	Lack of entrepreneurship in agriculture sector	3
Bank staff is not cooperative	4	Bank staff is not cooperative	4	High rate of interest on loan	4
Lack of security of collateral	5	Fear factor about recovery process	5	Loan amount is not sufficient	5
Fear factor about recovery process	6				

Investor Sentiments to Mutual Fund Investment

(Reference to Investor of Indore)

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Abstract

Financial markets have emerged as well-ordered and momentous to fight against price rises, mutual funds as a part of financial markets become popularized among investors because of their suitable nature and they also support easy operations with good earnings. Though they are not advantaged by many other investors as they are more depend upon bumpy stock markets and struggling hard to distinguish product mixture to induce retail investor. It is thus, timed to value and evaluates investor's notice and vision, and depicts some particularly valuable information to safeguard monetary evaluation of mutual fund investor. Financial markets are becoming broader with comprehensive financial products trying innovations in scheming mutual funds range, but these changes need blend in relationship with investor's prospect. Thus, it has become vital to study mutual funds from a different angle, which is to focus on investor's observation and viewpoint and disclose the disguised factors that are attributed for their disapproval. This research paper focuses attention on number of factors that are accountable to encourage an investor to invest in mutual funds.

Keywords: Mutual fund investment, Investor behavior, Investment preference, investment psychology, Investor sentiments, etc.

Introduction

It is a common belief that Mutual Fund is a retail product which is so designed for those who do not directly invest in share market because of its impulsive and unstable nature, but awestruck by the growth and returns given by the share market. After the declaration of 1991's liberalisation policy the growth of Indian economy is incredible and per capita income has also amplified. During last two decades growth of upper middle and middle class in India is also remarkable and this is the group who due to increase in income has enormous and changing needs, is targeted by all most all mutual fund companies but it is seen that this mutual fund companies are not succeed enough to turn savings individual investors in their products.

In India, a small investor generally prefers for bank deposits which do not provide hedge against inflation and often have negative real returns. He has a very limited knowledge of the sensitive index and again finds helpless to understand the information, if available from some expert, framed in technical and legal lexicon. He finds himself to be a deviant in the investment market. In such situation mutual funds acts as a supportive to these investors. Mutual funds are looked upon by individual investors as financial intermediaries/ portfolio managers who process information, identify investment opportunities, formulate investment strategies, invest funds and monitor progress at a very low cost. Thus, the success of mutual funds is essentially the result of the combined efforts of competent fund managers and alert investors.

The concept of Mutual funds has been on the financial landscape for long in a primitive form. The story of mutual fund industry in India started in 1963 with the formation of Unit Trust of India at the initiative of the Government of India and Reserve Bank. The launching of innovative schemes in India has been rather slow due to prevailing investment psychology and infrastructural inadequacies. Risk averse investors are interested in schemes with tolerable capital risk and return over bank deposit, which has restricted the launching of more risky products in the Indian Capital market. But this objective of the Mutual Fund industry has changed over the decades. For many years funds were more of a service than a product, the service being professional money management. In the last 15 years Mutual funds have evolved to be a product. A competent fund manager should analyse investor behaviour and understand their needs and expectations, to gear up the performance to meet investor requirements. It is the time for mutual fund companies to understand the fund selection/ switching behaviour of the investors' and to design the fund schemes according to the changing needs of consumer, otherwise survival of funds will be difficult in future. The present study made efforts in this regard to suggest ways to penetrate this mode of investment deep in Indian society it also provides the information that what present investor expects.

Objectives of the study

This research paper focused attention on number of factors that highlights investors' perception about mutual funds, these are to find, what are the factors that induce the investor to invest in mutual?

Review of Literature

Ippolito (1992) states that investor is ready to invest in those fund or schemes which have resulted good rewards and most investors' is attracted by those funds or schemes that are performing better over the worst. Goetzman (1997) opined that investor's psychology affects mutual fund selection for investment in and to withdraw from fund. De Bondt and Thaler (1985) submitted that mean reversion in prices of stock is backed by investor's retrogression which is based upon investor's psychology to overvalue firm's recent performance in forming future expected results which is also known as endowment effect. Gupta (1994) surveyed household investor for the objective to find investors' preferences to invest in mutual funds and other available financial assets. The findings of the study were more relevant, at that time, to the policy makers and mutual funds to design the financial products for the future. Kulshreshta (1994) in his study suggested some guidelines to the investors' that can help them to select needed mutual fund schemes. Shanmugham (2000) worked a survey of individual investors with the object to study on what information source does investor depends. The results explained that they are an economical, sociological and psychological factor which controls investment decisions. Madhusudhan V Jambodekar (1996) conducted his study to size-up the direction of mutual funds in investors and to identify factors influence mutual fund investment decision. The study tells that open-ended scheme is most favored among other things that income schemes and open-ended schemes and income schemes are preferred over closed-ended and growth schemes. News papers are used as information source, safety of principal amount and investor services are priority points for investing in mutual funds. Sujit Sikidar and Amrit Pal Singh (1996) conducted a survey to peep in to the behavioural aspects of the investors of the North-Eastern region in direction of equity and mutual fund investment. The survey resulted that because of tax benefits mutual funds are preferred by the salaried and self-employed individuals. UTI and SBI schemes were catch on in that region of the country over any other fund and the other fund had been proved archaic during the time of survey. Syama Sunder (1998) conducted a survey with an objective to get an in-depth view into the operations of private sector mutual fund with special reference to Kothari Pioneer. The survey tells that knowledge about mutual fund concept was unsatisfactory during that time in small cities like Visakapatanam. It also suggested that agents can help to catalyse mutual fund culture, open-ended options are much popular than any other schemes, asset management company's brand is chief consideration to

invest in mutual fund. Anjan Chakarabarti and Harsh Rungta (2000) emphasised to the importance of brand in ascertaining competence of asset management companies. Shankar (1996) suggested that for penetrating mutual fund culture deep in to society asset management companies must have to work and steer the consumer product distribution model. Raja Rajan (1997) underlined segmentation of investors and mutual fund products to increase popularity of mutual funds.

Sample Size

The sample size consists of 300 respondents. The respondents are segregated on the basis of different variables such as income, age, occupation gender, marital status, family size, religion, academic qualification and annual saving.

Tool of data collection

The basic design of survey instrument consists of structured questionnaires. It is so designed to collect all required information from investors of mutual funds. Based on their knowledge, information source and investment decision factors related to their selection of a particular scheme fund.

Objective

- To find the factors which influence the selection of mutual fund schemes.
- To find the factors showing expectations of investors in mutual fund.

Data source

The source of data would be primary and secondary, primary data will be collected through questionnaire the secondary data will be collected from related research works, published books, journals, and reports of Securities and Exchange Board of India (SEBI), Association of Mutual Fund of India (AMFI), Reserve Bank of India (RBI) and other authorized sources of data.

Research approach

The research will mainly use survey approach.

Tools of data analysis

The data and information collected will be classified, tabulated and processed and its findings presented in a systematic manner. Principal component analysis as Statistical tools is used to conduct the study.

Results and Discussions

Investment in Mutual fund- for this present research in all samples of 376 respondents is taken and it is found that 300 respondents are the investors in mutual fund remaining 76 are not investing in mutual funds. All the data collected is measured and interpreted on the factor of occupation of investor.

Financial markets are becoming more exhaustive with financial products seeking new innovations and to some extent innovations are also visible in designing mutual funds portfolio, but these changes need alignment in accordance with investor's expectations.

Present research proposed to identify critical gaps in the existing framework for mutual funds and further extend it to understand realizing the need of redesigning existing mutual fund services. For this various aspect are undergone that helps to find out the chief factors that influence investment decision of investor in mutual funds.

Factors influencing choice of mutual fund selection- to study this feature eight questions were asked to mutual fund investor, to be rate on the basis of 5 point likert scale (strongly disagree.....strongly agree form 15) these questions are-

1. Past Performance of fund
2. Income and Growth Prospects
3. Rating of fund
4. Market situation and speculation
5. Discloser of all related information by AMC (asset management company)
6. Name of company and fund manager
7. Low expanses and load in fund
8. Investment depends upon suggestions of broker

Factor analysis as statistical tool is used to find the reasons what for an investor factors induces to invest in mutual fund. Factor analysis with principal component is used to find desired results. This portion contains above mentioned 8 questions the data so used upon factor analysis is presented in following way.

In reliability analysis, No of Cases were 300 and No of Items were 16. Cronbanch Alpha is 0.893 which is greater than 0.75, hence the data is reliable.

The Kaiser-Meyer-Olkin Measure of Sampling Adequacy is a statistic that indicates the

proportion of variance in your variables that might be caused by underlying factors. High values (close to 1.0) generally indicate that a factor analysis may be useful with the data. If the value is less than 0.50, the results of the factor analysis probably won't be very useful.

Bartlett's test of sphericity tests the hypothesis that correlation matrix is an identity matrix, which would indicate that variables are unrelated and therefore unsuitable for structure detection. Small values (less than 0.05) of the significance level indicate that a factor analysis may be useful with the data.

Table 1: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.554
Bartlett's Test of Sphericity	Approx. Chi-Square	535.437
	df	28
	Sig.	.000

The above table shows Kaiser-Meyer-Oklin measure of sampling adequacy and Bartlett's test of sphericity the test refers that factor analysis is appropriate for these data, KMO measure = 0.554.

Table 2: Rotated Components for perception of mutual fund investors*

Factor	Item	Item Load	Factor Load	% of Variance
(1) Better performance by company	Name of Fund Manager /Asset Management Company	.753	2.766	25.157%
	Low Expenses and Load	.734		
	Past performance of Fund	.683		
	Discloser of Information by Asset Management Company	.596		
(2) Suggestion of advisor and prospects of fund	Income & Growth Prospects	.796	1.477	18.805%
	Investment depends upon suggestion of broker	.681		
(3) Market condition and rating of fund	Market Conditions	.859	1.585	18.470%
	Rating of Fund	.726		

*(refer table no. 1.1, 1.2 in appendix)

Discussion about the Factors found

- (1) Better performance by company-Table 2, discloses that most of the investors think that the factors that influence the investment in mutual fund includes name of fund manager and mutual fund company, they also prefer the fund which has low expenses and load again the investor prefer to invest in those companies who have good past records and investor is keen in the information given by mutual fund company from time to time.
- (2) Suggestion of advisor and prospects of fund- the factor which has second highest Eigenvalues is shown as per the table 2, investor thinks suitable in the funds which have good prospects of income and growth and most of the investor depends upon the suggestions and advice of the broker.
- (3) Market condition and rating of fund- the table 2 tells that maximum number of investor thinks that they would like to invest in mutual fund when the market conditions would be favorable for the investment they don't like to invest in funds when market is highly volatile like recession period of 2007-08. Investors also think that they will go for those funds which have good rating in market.

Expectations of investor from mutual fund investment- to study this feature eight questions were asked to mutual fund investor, to be rate on the basis of 5 point likert scale (strongly disagree.....strongly agree form 1.....5) these questions are-

1. Cost efficient management of fund
2. Investors' Right
3. Grievance Redressal
4. Right of regular and adequate Information
5. Quick and effective services
6. Repurchase facility in closed ended funds
7. Easy Transferability of fund
8. Freedom from lock-in Period

To know about what are the expectations of investor towards mutual fund, Factor analysis with principal component is used to find desired results. This portion contains above mentioned 8 questions the data so used upon factor analysis is presented in following way.

Table 3: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.406
Bartlett's Test of Sphericity	Approx. Chi-Square	313.611
	df	28
	Sig.	.000

The above table 3 shows Kaiser-Meyer-Oklin measure of sampling adequacy and Bartlett's test of sphericity the test refers that factor analysis is appropriate for these data, KMO measure = 0.406.

Table 4: Rotated Components for expectations of investors from mutual funds*

Factor	Item	Item Load	Factor Load	% of Variance
(1) low Cost management and quick services	Quick and effective Services	.933	1.645	18.905%
	Cost Efficiency	.712		
(2) Transferability and repurchasing facility	Repurchase Facilities	.892	1.585	17.000%
	Easy Transferability	.693		
(3) Proper grievance system and freedom from lock in period	Freedom from Lock in Period	.763	1.471	16.471%
	Grievance Redressal	.708		
(4) Rights of investor	Investor's Right	.703	1.454	15.770%
	Right of Information	.751		

*(refer table no. 2.1, 2.2 in appendix)

Discussion about the Factors found

- (1) low Cost management and quick services- Table 4 tells that most of the investors expects for quick and effective services from asset management companies and they also think that asset management companies should bring cost efficiency in their workings to boost profitability of funds.
- (2) Transferability and repurchasing facility- the table 4 discloses that investor demand for repurchasing facility in mutual fund with the feature of easy transferability.

- (3) Proper grievance system and freedom from lock in period- the table 4 shows, it is expectation of investor that there is a law which makes them free from the tension of lock in period so that they enjoy full liquidity of investment and they again expect that the Grievance Redressal system is needing to be proper and quick.
- (4) Rights of investor – the table 4 includes the factor with label of investors' right as to enjoy the investment in fund the investing should not be feel like burden on his pocket or it is like that to get lots of tensions with investment. Again, investor needs timely information regarding investment. There should be proper law to safeguard investor and the investment.

Factors influencing choice of mutual fund selection – According to the statistical tests done the factors that influence investors' fund selection behaviour includes; past performance of asset management company and rating of fund, income and growth prospects of fund, suggestions given by broker and agent, market conditions and load expenses in fund.

Expectations of investor from mutual fund – As per the survey done and application of statistical tests it is found that investor expects for quick and effective services on the part of asset management company along with cost effective fund management, repurchase facility in closed ended mutual funds, freedom from lock-in period, proper grievance system and right of proper information.

Conclusion and suggestions - The findings of the study may be proved to be great for reformation the working of asset management companies so as to induce more and more investors to this mode of investing. Mutual fund companies should come forward with full support for the investors in terms of advisory services, ensure full disclosure of related information to investor, proper consultancy should be given by mutual fund companies to the investors in understanding terms and conditions of different mutual fund schemes, such type of fund designing should be promoted that will ensure to satisfy needs of investors and style, proper system to educate investors should be developed by mutual fund companies to analyse risk in investments made by them, etc.

There are some suggestions for better investing for investors that they should take help of private financial consultants to have investment portfolio so as to reduce risk in investment, they should not invest in high volatile funds, they should collect all possible

information before investment, periodical review should be done for investment and risk analysis should be done regularly and properly, maintain proper records for each transaction. A careful and reasonable diversification of investment in mutual fund should also be there on investor's part to balance the risk involved in investment. It is also suggested that investor should have a habit of regular saving to earn some more extra consistently through changing market scenario since small savings will grow into bigger capital base. One of the strong suggestions is that to invest a reasonable part of investment in to liquid security so that to meet any contingency.

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Appendix

Table: 1.1, Total Variance Explained and Eigenvalues

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loading		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.235	27.932	27.932	2.235	27.932	27.932	2.013	25.157	25.157
2	1.688	21.104	49.036	1.688	21.104	49.036	1.504	18.805	43.962
3	1.072	13.396	62.432	1.072	13.396	62.432	1.478	18.470	62.432
4	.980	12.247	74.679						
5	.661	8.268	82.948						
6	.621	7.764	90.711						
7	.379	4.740	95.451						
8	.364	4.549	100.000						

Extraction Method: Principal Component Analysis.

The above table 2.1, list the Eigenvalues associated with each linear component (factor) before extraction, after extraction and after rotation. Before rotation factor 1 accounted for considerably more variance than remaining two (27.93% as compared to 21.104% and 13.396%).

Table: 1.2, Rotated Component Matrix ^a

		Component		
		1	2	3
Name of company and fund manager	A6	.753		
Low expenses and load in fund	A7	.734		
Past Performance of fund	A1	.683		
Discloser of all related information by AMC	A5	.596		
Income and Growth Prospects	A2		.796	
Investment depends upon suggestions of broker	A8		.681	
Market situation and speculation	A4			.859
Rating of Fund	A3			.726

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

a Rotation converged in 7 iterations.

The above table 2.4, shows Rotated Component Matrix it tells that factor 1 includes Labels respectively A6, A7, A1 and A5 while factor 2 includes A2 and A8 the final factor includes Label A4 and A3. These factors are shown below with the names in order of their highest Eigenvalues.

Table 2.1, Total Variance Explained and Eigenvalues

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	1.656	20.696	20.696	1.656	20.696	20.696	1.512	18.905	18.905
2	1.466	18.319	39.015	1.466	18.319	39.015	1.360	17.000	35.905
3	1.274	15.926	54.941	1.274	15.926	54.941	1.318	16.471	52.376
4	1.056	13.205	68.146	1.056	13.205	68.146	1.262	15.770	68.146
5	.961	12.007	80.154						
6	.660	8.251	88.404						
7	.581	7.265	95.669						
8	.346	4.331	100.000						

Extraction Method: Principal Component Analysis.

The above table 3.3 list the Eigenvalues associated with each linear component (factor) before extraction, after extraction and after rotation. Before rotation factor 1 accounted for considerably more variance than remaining three (20.696% as compared to 18.319%, 15.926% and 13.205%).

Table 2.2, Rotated Component Matrix ^a

		Component			
		1	2	3	4
Quick and effective services	B5	.933			
Cost efficient management of fund	B1	.712			
Repurchase facility in closed ended funds	B6		.892		
Easy Transferability of fund	B7		.693		
Freedom form lock-in Period	B8			.763	
Grievance Redressal	B3			.708	
Investor's Right	B2				.703
Right of regular and adequate Information	B4				.751

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

^a Rotation converged in 7 iterations.

The above table 4.2, shows Rotated Component Matrix it tells that factor 1 includes Labels respectively B5 and B1 while factor 2 includes B6 and B7 the third factor includes Label B8 and B3. final factor includes the labels B2 and B4. These factors are shown below with the names in order of their highest Eigenvalues.

Rural Marketing in India: Challenges and Opportunities

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Abstract

In India about 70% population is rural by nature. Population of rural India is 83.3 crore spread across 638000 villages. Over the past few years rural India has witnessed an increase in the purchasing power of consumers, accompanied by their desire to upgrade their standard of living. Host of projects, such as NREGA, HLL's project Shakti, retail hubs like Kisan Sansar (Tata), Haryali Kisan Bazar (DMC), both from the government and the private companies, have changed the rules of the marketing game in rural India. The paper discusses the profile of rural marketing in India; challenges and opportunities of Indian rural market. The paper studies the changing paradigm of the Indian rural markets and suggests some ways for overcoming the roadblocks in rural marketing. The Paper also focuses on innovative approaches in rural market. Modern rural marketing thus has varied dimensions and challenges.

Keywords: Rural Marketing, Challenges and Opportunities, Changing Paradigm, Innovative Approaches.

Introduction

About 70% of India's total population is rural by nature. Population of rural India is 83.3 crore spread across 638000 villages. The rural-urban distribution ratio currently is 68.84% and 31.16% respectively. A report by National Council of Applied Economic Research (NCAER) shows that rural segment comprises more than 50% of consumers constituting a prime market for consumer goods.

India is fast becoming an emerging market with an estimated 150 million strong middle-class consumers and about 50% of middle-class consumers placed in rural areas. Now corporate businesses in India are under pressure to capture the untapped rural market to increase their profitability and market share. Companies are adopting rural marketing in a broader context of sustainability in the era of intense competition to enhance their business and thereby also contributing towards the economic development and the welfare of the rural economy in India.

The term 'Rural marketing' used to be an umbrella term for the people who dealt with rural people in one way or the other. The rural market in India started showing its potential in the 1960s. The 1970s and 1980s witnessed its steady development. The term 'rural marketing' got separate meaning and importance after the economic liberalization in India after 1990. And, there are clear indications that the 21st century is going to see its full blossoming. So, before venturing into the other aspects of rural marketing let us discuss the development of this area in different phases which is shown in the table below:

Phase	Origin	Function	Major Products	Source Market	Destination Market
I.	Before Mid-1960s (from independence to green revolution)	Agricultural marketing	Agricultural Produce	Rural	Urban
II.	Mid-1960s (green revolution to pre-liberalization)	Marketing of Agricultural Inputs	Agricultural Inputs	Urban	Rural
III.	Mid-1990s (post-liberalization in 20 th century)	Rural Marketing	Consumables & Durables for consumption & Production	Urban and Rural	Rural
IV.	21 st century	Developmental Marketing	All Products and Services	Urban and Rural	Urban and Rural

Marketing in Modern India

Rural marketing involves the process of developing, pricing, promoting and distributing rural specific product and a service leading to exchange between rural and urban markets which satisfies consumer demand and also achieves organizational objectives. It is a two-way marketing process wherein the transactions can be;

1) Urban to Rural: A major part of rural marketing falls into this category. It involves the selling of products and services by urban markets in rural areas. These include; Pesticides, FMCG products, Consumer durables, etc.

2) Rural to Urban: Transactions in this category basically fall under agricultural marketing where a rural producer seeks to sell his produce in an urban market. An agent or a middleman plays a crucial role in the marketing process. The following are some of the important items sold from rural to urban areas; Seeds, Fruits and Vegetables, Milk and Related Products, Forest Produce, Spices, etc.

3) Rural to Rural: This includes the activities that take place between two villages in close proximity to each other. The transactions relate to the areas of expertise the particular village has. These include selling of agricultural tools, cattle, carts and others to another village in its proximity.

Review of Literature

Dr. V.K. Bishnoi, Rural & Agricultural Marketing (MBA Project): The rural market in India is fascinating and challenging at the same time. It offers large scope on account of its sheer size and it is growing steadily. Even a small growth can push up the sales of a product substantially, in view of the huge base despite the fact that there are enormous amount of problems. It is an attractive market from this angle too that the urban market is highly competitive; the rural market is relatively quiet. In fact, for certain products, it is a totally virgin market.

The McKinsey Report (2007) on the rise on consumer market in India predicts that in twenty years the rural Indian market will be larger than the total consumer markets in countries such as South Korea or Canada today, and almost four times the size of today's urban Indian market and the estimated size of the rural market is \$577 Billion.

Harish Bijoor observes about Rural Markets: "There are two India's; Real India and Virtual India. Virtual India is where a most of us come from. Real India is a huge chunk of landmass where 742 million people live. It's populous, multi-cultural & multifaceted. Real India is today run by virtual India".

Salal Kumar Velayudhan, in his book "Rural Marketing: Targeting the Non-Urban Consumers", Sage Publications, gives a detailed profile of the rural consumer. He also propagates the relevance of haats and melas and highlights their underutilization. He also highlights various emerging channels to access the rural markets.

Prof Ramkishan Y., in his book "New Perspective in Rural and Agricultural Marketing: Case Studies" discusses through various case studies, product lifecycle of rural products and how they differ from urban products. He has also discussed standardization and grading systems in India and their relevance in rural markets.

Vivek Parikh (2001) pointed out that most of the rural markets underestimate the verbal power magic of words to enter into the rural market, and again (2008) he added some other dimensions necessary for markets.

Important Features of Rural Market in India

- a) Large and scattered market
- b) Diverse socio-economic background
- c) Changing demand pattern
- d) Major income comes from agriculture
- e) Saving habits
- f) Traditional outlook
- g) Low standard of living
- h) Media reach

Opportunity for Rural Market

India's rural market offers a huge potential for the traders and seems to be the replacement of urban market. The rural market is extremely attractive with its vast demand base and offers the following opportunities.

1) Large Population: 742 million Indians constituting 138 million households, reside in 638365 villages (Census, 2001). The size of rural market itself speaks of its potential.

2) Growth in Market : The major Indian consumer base is present in rural areas, the FMCG sales have grown at 6-7 percent over the last couple of years, and rural markets contribute about 40-50 percent of revenue, which is very impressive. The demand for the personal care products grew faster in rural areas than urban areas. Most of the FMCG corporations have increased their hiring in rural India in order to establish a rural contact and increase visibility. The rural market will be a key growth driver for FMCGmajors planning to expand their domestic business.

3) I.T. Penetration in Rural India: Today's rural children and youth will grow up in an environment where they have 'information access' to education opportunities, exam results, career counseling, job opportunities, government schemes and services, health and legal advice and services, worldwide news and information, land records, mandi prices, weather forecasts, bank loans and livelihood options. If television could change the language of brand communication in rural India, affordable Web connectivity through various types of communication hubs will surely impact the currency of information exchange. As the electronic ethos and IT culture moves into rural India, the possibilities of change are becoming visible.

4) Impact of Globalization: The impact of globalization will be felt in rural India as much as in urban. But it will be slow. It will have its impact on target groups like farmers, youth and women. Farmers, today 'keep in touch' with the latest information and maximize both ends. They keep their cell phones constantly connected to global markets. On youth its impact is on knowledge and information and about women it still depends on the socio-economic aspect.

5) Increasing Income and Purchasing Power: The agricultural development programs of the government have helped to increase income in the agricultural sector. These in turn have created greater purchasing power in rural markets.

6) Accessibility of Markets: The attraction of a market depends not only on its potential but also on its accessibility. The road network has facilitated a systemized product distribution system to villages. An increasing number of companies are supplying village markets directly. Increasing direct contacts to villages helps product promotion and availability of the product in the village shop.

7) Consumer Behavior Changes: Increased literacy and greater awareness in rural markets create new demands and discriminating buyers. This is observed more in the younger generation. In villages today, this segment of buyers consumes a large variety of products, both durables and non-durables. There is a visible increase in the consumption and use of a variety of products, which is easily observed.

8) Competition in Urban Markets: Intensified competition in urban markets increases costs and reduces market share. The rural markets are therefore increasingly attractive in relation to urban markets. The automobile market brings this out clearly. Rajdoot motorcycles, Bajaj scooters or Ambassador Cars find ready acceptance in rural markets as compared to urban markets where there is a proliferation of brands.

9) New Employment Opportunities: Government schemes like Integrated Rural Development Programme, Jawahar Rozgar Yojana and Training Rural Youth for Self Employment have created new employment opportunities in Rural India. As a result very few rural people are now flocking to urban centers.

10) Green Revolution: The vision of Dr. Swaminathan, the father of the green revolution to achieve self-sufficiency in food grain production in 1995, gave a major breakthrough in food grain production by the use of scientific methods in agriculture. At present, Rural India generates 299 million tons annually.

Various Government Policies

The government's stress on self-sufficiency resulted in various schemes like Operation Flood (White Revolution), Blue Revolution, Yellow Revolution, etc. resulted in the production of 15 million tons of milk per annum.

1) Better Credit Facilities through Banks: With co-operative banks taking the lead in the rural areas, every village has access to short, medium, long-term loans from these banks. The credit facilities extended by public sector banks through Kisan Credit Cards help the farmers to buy seeds, fertilizers and consumer goods on installments.

2) Green Card / Credit Card for Farmers: The government initiated credit cards for farmers through public sector banks. Canara bank and Andhra bank were the pioneers in the launch of the Kisan Credit Card. The farmer had a choice to take short or medium term loans through these credit cards to buy seeds, fertilizers, etc. This enabled him to produce more and thereby increase his income.

3) Improved Exports Due to Export Policy: The new Export Policy 2000 paves the way for open market (OGL- Open General License System) status for agriculture. The World Trade Organization's Policy for agro-exports has increased exports of Indian agricultural produce thereby increasing incomes of the rural population.

4) Remittances from Indians Working in Abroad: These remittances are a sizeable contribution to growing rural income & purchasing power

5) Development programmes: The five-year plans have witnessed massive investments in rural areas in terms of number of development programmes implemented by the central and state Government. Some of these programmes are:

- Ø Intensive Agricultural District Programme (IADP- Package Programme)
- Ø Intensive Agricultural Area Programme (IAAP)
- Ø High Yielding Varieties Programme (HYVP- Green Revolution)
- Ø Drought Prone Areas Programme (DPAP)
- Ø Small Farmers Development Agency (SFDA)
- Ø Hill Area Development Programme
- Ø Operation Flood I, II and III (White Revolution)
- Ø Fisheries Development Programme (Blue Revolution)
- Ø Integrated Rural Development Programme (IRDP)

These programmes are related to agriculture and allied activities but there are certain other policies which are specifically meant to raise the standard of the rural people in the field of health, education, sanitation etc. After the beginning of economic reforms in 1991, the Government has been giving special attention to rural India by providing certain developmental schemes for these areas.

Political and Social Changes through Favorable Government Policies

The Indian Government launched a number of schemes like Integrated Rural Development Programme and Rural Electrification

Programme in the 1970s, which gave a boost to the agrarian economy. This resulted in changes in people's habits and social life. REP gave impetus to the development of consumer durable industry.

Media: Mass Media has created increased demand for goods and services in rural areas. Smart marketers are employing the right mix of conventional and non-conventional media to create increased demand for products. The role of cable television has been noteworthy in bringing about the change in rural people's mind set and influencing their lifestyles. Some types of media are as under;

Mass Media	Local Media	Personalized Media
Radio, Cinema, Press, TV	Haats, Melas, Fairs, Wall Paintings, Hoardings, Leaflets Video, Vans Folk, Media Animal, Parade Transit	Direct Communication, Dealers, Sales Persons, Researchers

Challenges for Rural Marketing

There are many challenges to be tackled in rural marketing, despite rapid strides in the development of the rural sector. Some of the challenges are discussed below:

1) Transportation: Transportation is an important aspect in the process of movement of products from urban production centers to remote villages. The transportation infrastructure is extremely poor in rural India. Due to this reason, most of the villages are not accessible to the marketing man. In our country, there are six lakhs villages. Nearly 50% of them are not connected by road at all.

2) Communication: Marketing communication in rural markets suffers from a variety of constraints. The literacy rate among the rural consumers is very low. Print media, therefore, has limited scope in the rural context. Apart from low levels of literacy, the

tradition-bound nature of rural people, their cultural barriers and their overall economic backwardness add to the difficulties of the communication task.

3) Availability of appropriate media: It has been estimated that all organized media in the country put together can reach only 30 per cent of the rural population of India. The print media covers only 18% of the rural population. The radio network, in theory, covers 90 %.But, actual listenership is much less. TV is popular, and is an ideal medium for communicating with the rural masses. But, it is not available in all interior parts of the country.

4) Warehousing: A storage function is necessary because production and consumption cycles rarely match. Many agricultural commodities are produced seasonally, whereas demand for them is continuous. The storage function overcomes discrepancies in desired quantities and timing. In warehousing too, there are special problems in the rural context. The central warehousing corporation and state warehousing, which constitute the top tier in public warehousing in our country, have not extended their network of warehouses to the rural parts. It is almost impossible to distribute effectively in the interior outlets in the absence of adequate storage facilities.

5) Village structure in India: In our country, the village structure itself causes many problems. Most of the villages are small and scattered. It is estimated that 60% of the villages are in the population group of below 1000. The scattered nature of the villages increases distribution costs, and their small size affects economic viability of establishing distribution points.

6) Rural markets and sales management: Rural marketing involves a greater amount of personal selling effort compared to urban marketing. The rural salesman must also be able to guide the rural customers in the choice of the products. It has been observed that rural salesmen do not properly motivate rural consumers. Channel management is also a difficult task in rural marketing. The distribution channels in villages are lengthy involving more intermediaries and consequently higher consumer prices.

7) Inadequate banking and credit facilities: In rural markets, distribution is also handicapped due to lack of adequate banking and credit facilities. The rural outlets require banking support to enable remittances, to get replenishment of stocks, to facilitate credit transactions in general, and to obtain credit support from the bank. Retailers are unable to carry optimum stocks in the absence of adequate credit facilities. Because of this problem, they are not able to offer credit to the consumers.

Market segmentation in rural markets

Market segmentation is as important in rural marketing as it is in urban marketing. Most firms assume that rural markets are homogeneous. It is unwise on the part of these firms to assume that the rural market can be served with the same product, price and promotion combination.

1) Branding: The brand is the surest means of conveying quality to rural consumers. Day by day, local brands are playing a significant role in rural areas. This may be due to illiteracy, ignorance and low purchasing power of rural consumers. It has been observed that there is greater dissatisfaction among the rural consumers with regard to selling of low quality duplicate brands, particularly soaps, creams, clothes, etc. whose prices are often half of those of national brands, but sold at prices on par.

2) Packaging: As far as packaging is concerned, as a general rule, smaller packages are more popular in the rural areas. At present, all essential products are not available in villages in smaller packaging. The lower income group consumers are not able to purchase large and medium size packaged goods. It is also found that the labeling on the package is not in the local language. This is a major constraint to rural consumers understanding the product characteristics.

3) Seasonable Income: Rural people are dependent on the rainy season for their income. If the season of agriculture is in their favor, they have sufficient income, otherwise they are not able to spend amounts for purchasing of many products.

4) Traditional living style: Rural people are still living in their own traditional style. They don't want to change and are not ready to accept the modern product easily.

5) Language: In India, there are 18 recognized languages. All these languages and many dialects are spoken in rural areas. English and Hindi are not understood by many people. Due to these problems, rural consumers, unlike urban consumers, do not have exposure to new products.

Rural Marketing: Success Stories by using Innovative Ways

In late 1970s Velvet initiated a Shampoo revolution by introducing shampoos in small sachets and Sachets changed the structure of the shampoo industry and created new layers of customers from rural sector joined in (Upper class tag attached with shampoo was wearing away) matching to the life-styles and requirements of the rural consumers and paved a new route to the customers for trial of new products which was mutually rewarding to both customers and corporates.

The success story was repeated by Chik; launched in 1983 by Cavin Kare at a time when the market that was flooded with seventy odd small labels, mostly of low quality with little differentiation and it was copied by other business firms, corporates and MNCs even for their high end brands. This new success identified the opportunity for Chik that a good quality, moderately priced with an appealing perfume product will be a product looked upon by the consumer and this revealed a new segment for the corporate. It targeted the segment of females 16+ age group having Rs.1500-3000/month income and created a product using French Perfume and differentiated on the plank of superior fragrance fortified with the strategy of innovative Radio Ads using film dialogues and jingles. In 1990 it went still aggressive by launching floral fragrances; rose & jasmine when the sales jumped to Rs. 30 lakhs and the market share rose from 4.8% to 23%.

With rural consumers increasing their appetite for better products and high-standard services, fast-moving consumer goods (FMCG) companies intensified their efforts in rural India in 2012-13. FMCG majors like Dabur India and Hindustan Unilever (HUL) vouch for their rural markets and consider them to be extremely critical for the growth of their businesses. HUL's decade-old Shakti initiative underwent a technology-overhaul in 2012 wherein about 40000 Shakti Ammas were equipped with a basic Smartphone. These Smartphones had inbuilt software that enabled them to take and bill orders, manage inventory and receive updates on promotional schemes offered by the company. Reportedly, the Shakti initiative delivers around 20% of Unilever's overall

rural sales. While HUL empowered rural women as Shakti Ammas, Dabur India made rural people use the company's sample products and experience the benefits for themselves. The idea was to spread awareness about the company's products through word-of-mouth advertising.

Havells India Ltd projects in housing sector, particularly in rural areas, are set to see a boom in coming years. As higher demand for houses imply greater demand for lighting and other domestic electrical goods, the fast moving electrical goods and power distribution equipment manufacturer plans to enter into rural Indian market with its newly-launched 'Rio' switches.

Marketers focused on the countryside adopt a multipronged approach to reach the rural fragmented markets. They apply various permutations and combinations of strategies to woo the rural consumers. For instance, two-wheeler manufacturer Hero Motors added authorized representative dealers to its existing hub-and-spoke network. Appointed by the

authorized dealers, the representatives facilitate easy purchasing and servicing of the bikes for locals. This step added more than 5000 touch points to Hero's channel strategy, enabling the company to extend its reach to 20% of India's 600000 villages.

Several FMCG companies such as Godrej, Dabur and Marico have increased their marketing efforts in rural India and small towns in order to establish local distribution networks and increase visibility. "Rural mela's" are being organized by Godrej in order to access potential rural consumers. Major domestic retailers like AV Birla, ITC, Godrej, Reliance and many others have already set up farm linkages. Hariyali Kisan Bazaars (DCM) and Aadhars (Pantaloone-Godrej JV), Choupal Sagars (ITC), Kisan Sansars (Tata), Reliance Fresh, Project Shakti (Hindustan Unilever) and Naya Yug Bazaar have established rural retail hubs.

Amul adopted a hybrid strategy of adopting latest technology combined efficiently with traditional models and ensured better returns for the rural farmer, even though related only to the supply side, it empowered rural India or created wealth for them and thus made an innovation in creating capacity to consume. Amul makes 10 million transactions and payments in the neighborhood of Rs.170 million.

Coca-Cola and Pepsi soft drink brands suffered a setback in August 2008 due to a product contamination scare. Both of them had already cut profit margins in order to fend off competition from low-priced local fruit drinks. This prompted their focus to shift to the rural belts. But rural India is still a highly price-sensitive marketplace. Moreover the average consumer has insufficient income to engage in discretionary spending. In order to position themselves for sales growth, the major soft drink companies priced a 200-ml bottle at Rs 5 per bottle. In order to remain cost competitive, soft drink companies had to contain the transportation costs involved in expanding their distribution network into distant towns and villages. Faced with high fuel and vehicle costs, companies are turning to less expensive means of transportation including ox carts and rickshaws.

Conclusion

At the challenges and the opportunities which rural markets offer to the marketers, it can be said that the future is very promising for those who can understand the dynamics of rural markets and exploit them to their best advantage. A radical change in attitudes of marketers towards the vibrant and burgeoning rural markets is called for, so they can successfully impress on the 230 million rural consumers spread over approximately six hundred

thousand villages in rural India. The rural market is very large compared to the urban market and it is a more challenging market. The consumer wants those products which are long lasting, good, easy to use and cheaper. The income level of rural consumers is not as high as the income level of urban consumers so they want low price goods. It is one of the reasons that the sale of sachet is much larger in the rural area in all segments. It is necessary for all the major companies to provide those products which are easily available and affordable to the consumers. It is right that the profit margin is very low in the FMCG products, but at the same time the market size is much large in the rural area. The companies can reduce their prices by cutting the costs on the packaging because the rural consumers don't need attractive packaging. Rural market has an untapped potential like rain but it is different from the urban market so it requires different marketing strategies and marketer has to meet the challenges to be successful in rural market. It is generally believed that markets are created, not found. This is especially true in case of the rural market in India; "It is a market for the truly creative marketer".

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Data-Reducts through Non-Classical Sets

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Abstract

Rough set theory proposed by Pawalk in 1982 with concept of approximation. Molodtsov's introduce the concept of Soft set theory which is based on the novel granulation structures called soft approximation spaces. Both the theory used to handle vagueness and uncertainty of the data. The paper deals with the concept of rough set and soft set theory for finding the reducts and core.

Keywords: Rough Set Theory, Data Reduction, Non-Classical Sets, Soft Sets, etc.

Introduction

In real life, there are many situations where we need to handle data. Sometimes these data contain uncertainty and vagueness. There are many methods to handle such types of problem like fuzzy set theory [1], rough set theory [2], Soft Set Theory [3] etc. Rough set theory based on the approximation of a vague concept (set) by a pair of precise concepts called lower and upper approximation [4]. After few years, In 1999, Molodtsov's introduce new mathematical tool as Soft set theory for dealing with uncertainty and vagueness of data [3]. In soft set theory membership is decided by adequate parameters, rough set theory employee equivalence classes [5]. Maji et. al. applied soft set theory in decision making problem [6].

Methods

In this paper, U denotes universe set and let E be a set of parameters. This section briefs on the basic notions of RST and soft set theory used in this paper and the detailed definitions can be referred to some related literatures [4, 7, 8, 9].

Definition 1 An information system (IS) is a pair (U, A) , where U is a nonempty, finite set of objects called the universe and A is a nonempty, finite set of attributes, such that $a: U \rightarrow V_a$ for any $a \in A$, where V_a is called the domain of attribute a .

Definition 2 Indiscernibility Relation is a central concept in Rough Set Theory, and is considered as a relation between two objects or more, where all the values are identical in relation to a subset of considered attributes.

For every set of attribute $B \subseteq A$, an indiscernibility relation $IND(B)$ is defined in the following way:

$$IND(B) = \{(x_i, x_j) \in U, b(x_i) = b(x_j), \forall b \in B\}$$

Indiscernibility relation is an equivalence relation, where all identical objects of set are considered as elementary sets of the universe U in the space B i.e., partition determined by B , will be denoted by $U/IND(B)$, or simple U/B . An equivalence class of $IND(B)$, i.e., block of the partition U/B , containing x will be denoted by $B(x)$.

Concept of Rough Set Theory

Definition 3 The lower Approximation contains all objects which surely belong to the set.

$$B_*(X) = \{x_i \in U : B(x_i) \subseteq X\}$$

Definition 4 The Upper Approximation ion contains all objects which possible belong to the set.

$$B^*(X) = \{x_i \in U : B(x_i) \cap X \neq \emptyset\}$$

Definition 5 The difference between Upper and Lower Approximation is called Boundary Region.

$$BN_B(X) = B^*(X) - B_*(X)$$

If the boundary region of X is the empty set, i.e., $BN_B(X) = \emptyset$, then the set X is crisp (*exact*) with respect to B ; in the opposite case, i.e., if $BN_B(X) \neq \emptyset$, the set X is rough (*inexact*) with respect to B .

Rough set can be also characterized numerically by the following coefficient

called *accuracy of approximation*. Obviously $0 \leq \alpha_B(X) \leq 1$. If $\alpha_B(X) = 1$, X is crisp with respect to B (X is *precise* with respect to B), and otherwise, if $\alpha_B(X) < 1$, X is *rough* with respect to B (X is *vague* with respect to B).

Definition 6 If we distinguish in an information system two disjoint classes of attributes, called condition and decision attributes, respectively, then the system will be called a decision table and will be denoted by $S = (U, C, D)$, where C and D are disjoint sets of condition and decision attributes, respectively.

Definition 7 Reduct and core attribute sets are two fundamental concepts of Rough Set Theory. Reducts are the most precise way of discerning object classes, which are the minimal subsets provided that the object classification is the same as with the full set of attributes. The core is common to all reducts.

The reducts process for attributes reduces elementary set numbers, the goal of which is to improve the precision of decisions. After the attribute dependence process, the reduct attribute sets are generated to remove superfluous attributes, so that the set of attributes is dependent. The complete set of attributes is called a reduct attribute set. There may be more than one reduct attribute set in an information system, but intersecting a number of reduct attribute sets yields a core attribute set. The reduct attribute set affects the process of decision making, and the core attribute is the most important attribute in decision making.

$$RED(B) \subseteq A$$

$$COR(C) = \bigcap RED(B)$$

To compute reducts and core, the discernibility matrix is used.

A discernibility matrix of a decision table (U, CUD) is symmetric $|U| \times |U|$ matrix with entire defined by $C_{ij} = \{a \in C \mid a(x_i) \neq a(x_j)\}$ for $i, j = 1, 2, 3, \dots, |U|$. The discernibility matrix assigns to each pair of objects x and y a subset of attributes $\delta(x, y) \subseteq B$ with the following properties.

1. $\delta(x, x) = \emptyset$
2. $\delta(x, y) = \delta(y, x)$
3. $\delta(x, z) \subseteq \delta(x, y) \cup \delta(y, z)$

Example

To illustration above definition, let us consider the following Example.

Let, $U = \{x_1, x_2, x_3, x_4, x_5, x_6\}$ is a universal set. In given Table 1 columns $C = \{C_1, C_2, C_3, C_4\}$ represent conditional attributes and column D represents decision attribute. The elementary set of four attributes is $U/C = \{x_1, x_2, x_6\}, \{x_3, x_5\}, \{x_4\}$ and decision attribute set $D = \{0, 1\}$.

Table 1

U	C_1	C_2	C_3	C_4	D
X1	1	1	1	1	1
X2	1	1	1	1	0
X3	1	1	0	0	1
X4	1	0	0	1	0
X5	1	1	0	0	1
X6	1	1	1	1	0

Thus, the Lower approximation is $C^*(1) = \{x_3, x_5\}$ and upper approximation is $C^* = \{x_1, x_2, x_3, x_4, x_5\}$. Boundary region of set is $BNB(1) = \{x_1, x_2, x_6\}$. Accuracy of approximation is 0.40. The discernibility matrix is used to find reduct which leads to the same partition of the data as the whole set of attributes P . To do this, one has to construct the discernibility function $f(P)$, a Boolean function. The minimal subset of attributes (reduct) of dataset is obtained by converting the Boolean expression from conjunctive normal form to disjunctive normal form. Hence the reduct generated from the discernibility matrix is $\{C_2, C_3\}$, $\{C_2, C_4\}$ and $\{C_3, C_4\}$

Basic concept of Soft set theory

Definition 8 A pair (F, E) , is called soft set (over U) if and only if F is a mapping of E into the set of all subsets of the set U i.e., $F: E \rightarrow P(U)$, where $P(U)$ is the power set of U .

The soft set is a parameterized family of subsets of the set U . Every set $F(e)$, $e \in E$ from this family may be considered as the set of e - elements of the soft set (F, E) or as the e - approximate element of the soft set.

Definition 9 Assume that a binary operation, denoted by $*$ for subsets of the set U . Let (F, A) and (G, B) be soft sets over U . Then the operation $*$ for soft sets is defined in the following way $(F, A) * (G, B) = (H, A \times B)$, Where $H(\alpha, \beta) = F(\alpha) * G(\beta)$, $\alpha \in A$, $\beta \in B$ and $A \times B$ is the Cartesian Product of the set A and B .

Definition 10 Let R be a family of equivalence relation and Let $A \in R$. We say that A is dispensable in R if $IND(R) \setminus IND\{R - \{A\}\}$, otherwise A is indispensable in R . The family R is independent if $A \in R$ is indispensable in R , otherwise R is dependent. $Q \subset P$ is a reduction of P if Q is independent and $IND(Q) = IND(P)$ that is to say Q is the minimal

subset of P that keeps the classification ability. The set of all indispensable relation in P will be called the core of P and will be denoted as $CORE(P)$. Clearly $CORE(P) = \cap RED(P)$ where $RED(P)$ is the family of all reduction of P . If Q is reduction of P , then the soft set (F, Q) is called the reduct soft set of the soft set (F, P) . The choice value of an object are

$x_i \in U$ in cv_i , given by $cv_i \in x_{ij}$ are the entries in the table of the reduct soft set.

Algorithm of normal Parameter Reduction

1. Input the soft set (F, E) .
2. Input the parameter set E .
3. Compute parameter importance degree $r_{ei} (1 \leq i \leq m)$
4. Select maximal subset $A = (e'_1, e'_2, e'_3, \dots, e'_p)$ in E which satisfying that sum $r_{e'_i} (1 \leq i \leq p)$ is nonnegative integer, then put the A into a feasible parameter reduction set.
5. Check A , if $f_A(h_1) = f_A(h_2) = \dots = f_A(h_n)$ then $E - A$ is the normal parameter reduction and A is saved in the feasible parameter reduction set, otherwise A is delete from the feasible parameter reduction set.
6. Find the maximum cardinality of A in feasible parameter reduction set.
7. Compute $E - A$ as the optimal normal parameter reduction.

For Example take data display from above Table 1. According to this data normal parameter reductions of soft set are $\{C_2, C_3\}, \{C_2, C_4\}, \{C_3, C_4\}, \{C_1, C_2, C_3\}, \{C_1, C_2, C_4\}, \{C_2, C_3, C_4\}, \{C_1, C_3, C_4\}$ $C_E = \{\{x_1, x_2, x_6\}_4, \{x_3, x_5\}_2, \{x_4\}_2\}$, $C_{E-C1} = \{\{x_1, x_2, x_6\}_3, \{x_3, x_5\}, \{x_4\}_1\}$, $C_{E-C2} = \{\{x_1, x_2, x_6\}_3, \{x_4\}_2, \{x_3, x_5\}_1\}$, $C_{E-C3} = \{\{x_1, x_2, x_6\}, \{x_3, x_5\}_2, \{x_4\}_2\}$, $C_{E-C4} = \{\{x_1, x_2, x_6\}, \{x_3, x_5\}_2, \{x_4\}_1\}$. The important degree of C_1 for the decision is as

$$\text{follows } r_{c1} = (3 + 2 + 1) = \quad, r_{c2} = (3 + 2 + 0) = \quad,$$

$$r_{c3} = (3 + 0 + 0), r_{c4} = (3 + 0 + 1) = \quad.$$

Now calculate

$$r_{c2} + r_{c3} = 1.33, r_{c2} + r_{c4} = 1.5, r_{c3} + r_{c4} = 1.16,$$

$$r_{c1} + r_{c2} + r_{c3} = 2.16, r_{c1} + r_{c2} + r_{c4} = 2.33, r_2 + r_3 + r_4 = 2, r_1 + r_3 + r_4 = 2.$$

According to algorithm feasible parameter reduction set is $\{C_1\}$; and its cardinality is one.

Hence optimal normal parameter reduct is $\{C_2, C_3, C_4\}$

Conclusion

In this paper, rough set theory and soft set theory approach are used to find the reducts and for finding the optimality of reducts used norm parameter reduction algorithm that needs to find important degree of the attributes and the irrelationship with other attributes.

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Fundamentals of Soft Set Theory

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Abstract

The concept of soft set theory was introduced by D. Molodtsov in 1999 for modeling uncertainty. Soft set theory suggests a general mathematical tool for dealing with uncertain fuzzy sets or not clearly defined objects. Basically, a set is a well-defined collection of distinct objects, but soft set is not. The aim of this paper is to introduce the concept of soft set and some operations on soft sets. Fuzzy set theory, Rough set theory and Soft set theory are mathematical tools for dealing with uncertainties and are strictly related. Soft set theory is a newly developing tool of fuzzy set and Rough Set theory. In this paper we will do study on a briefly development of soft set theory and define the concept of soft set and Mathematical operation. The main purpose of this paper is to extend the theoretical characteristic of operations on soft sets.

Keywords: Soft Set, Predicate of soft set, Approximation value set, different types of soft sets by definitions.

Introduction

In economics, engineering, Medical science, environmental science, sociology and many other fields we have to solve complicated problems with the difficult problems of modeling uncertain data that are not always crisp. While some mathematical theories like probability theory, fuzzy set theory [1, 2], rough set theory [3, 4], vague set theory [5] and the interval mathematics [6] are useful techniques to solve or describe uncertainty. All these theories have characteristic difficulties as mentioned by Molodtsov [1999]. The reason for these difficulties is possibly the insufficiency of the parameterization tool of the theories. In 1999 Molodtsov [7] recommended the concept of soft theory as a mathematical tool for dealing with uncertainties which is free from the above difficulties.

Work on soft set theory has been continuing quick Since Maji et al. [8] introduced several operations of soft sets. Then Pei and Miao [9] and Ali et al. [10] introduced and studies several soft set operations as well Soft set theory has also possible applications in many fields including the smoothness of functions, game theory, operations research, Riemann integration, Perron integration, probability theory and measurement theory. Particularly it

has been successfully applied to soft decision making in [11 – 15]. The basic concepts of soft set theory and compared soft sets to fuzzy and rough sets studied by Aktas and ca~gman [16]. They also studied soft groups, soft subgroups and normal soft subgroups. Other many authors [17 – 25] have studied the soft algebraic structures and soft operations as well. In this paper, we try to find an answer to the question on the classical set operations and their interrelations between each other correspond to soft set operations. While studying with this aim we have seen some similarities and there is some dissimilarity too. The paper is prepared as follows: the basic properties of operations on soft set like intersection, union, and De Morgan's law holds in soft set theory with respect to different operations on soft sets well – defined by Maji et al., Pei and Miao and Ali et al. [8 – 10]. Then we explain the interconnections between each other. Lastly, we define the concept of restricted symmetric difference of soft sets and study its properties with a corresponding example. This paper can be classified as a theoretical study of soft sets.

Soft set theory has a large potential for applications in several directions which had been shown by Molodtsov [1999] in his first result. In this paper we make an optimization and theoretical study of the “soft set theory” in further detail. This paper can be classified as a theoretical study of soft sets Theory.

All the above given mathematical theories (probability theory, fuzzy set theory, rough set theory, vague set theory and the interval mathematics) are useful in many cases but they are not adoptable for problems with different uncertainties. They cannot suitably describe a smooth changing of information, unreliable, not satisfactory, and imperfect information, and partially contradicting purposes and so on.

In 1965 the most applicable theory, for dealing with uncertainties is the theory of fuzzy sets developed by L. A. Zadeh [1]. Here we remember the definition of the concept of fuzzy set.

For every set $A \subset X$, define its indicator function μ_A .

This is one – to – one correspondence between a set and its indicator function.

A fuzzy set F is described by its membership function μ_F . To each point $x \in X$. This function related a real number $\mu_F(x)$ in the interval $[0, 1]$. The number $\mu_F(x)$ is interpreted for the point as a degree of belonging x to the fuzzy set F .

Operations of Fuzzy Sets

Assume F and G be the fuzzy sets, and μ_F, μ_G be their membership functions. Then, the complement CF is defined by its membership function.

$$\mu_{CF}(x) = 1 - \mu_F(x)$$

The intersection $F \cap G$ can be defined by the following membership functions

$$\mu_{F \cap G}(x) = \min \{ \mu_F(x), \mu_G(x) \},$$

$$\mu_{F \cap G}(x) = \mu_F(x) \cdot \mu_G(x)$$

$$\mu_{FG}(x) = \max \{ 0, \mu_F(x) + \mu_G(x) - 1 \}$$

The intersection $F \cup G$ can be defined by the following membership functions

$$\mu_{F \cup G}(x) = \max \{ \mu_F(x), \mu_G(x) \}$$

$$\mu_{F \cup G}(x) = \mu_F(x) + \mu_G(x) - \mu_F(x) \cdot \mu_G(x)$$

$$\mu_{F \cup G}(x) = \min \{ 1, \mu_F(x) + \mu_G(x) \}$$

Currently, the theory of fuzzy sets is continuing broadly. But there exists a difficulty: how to set a membership function in each particular problem. So, the fuzzy set operations based on the arithmetic operations with membership functions do not look natural. The purpose for these difficulties is, maybe, the insufficiency of the parameterization tool of the theory. Now, we purpose a mathematical tool for dealing with uncertainties which is free of the difficulties stated above.

Main concept of Soft Set Theory

To avoid difficulties, Molodtsov introduced the soft set in the following way. Use an acceptable parameterization. Let U be an initial universe set and let E be a set of parameters. Let $P(U)$ denotes the power set of U and $A \subseteq E$.

Definition : A pair (F, A) is called a soft set over U , where F , is a mapping given by

$$F: A \rightarrow P(U)$$

In other words, a soft set over U is a parameterized family of subsets of the universe U . For any $\epsilon \in A$, $F(\epsilon)$ be considered as the set of ϵ - approximate elements of the soft set (F, A) . Clearly, a soft set is not a set. For illustration, we show several examples:

Example: 1. Suppose the following,

U = The set of houses under consideration,

E = The set of parameters is a word or a sentence {expensive; beautiful; wooden; cheap; in the green surroundings; modern; in good repair; in bad repair}.

In this example, to explain a soft set means to point out expensive house, beautiful house, and so on. The soft set (F, E) describes the “attraction of the house” which Mr. Y (assume) is going to buy.

Now we represent above example in more detail, suppose there are 6 houses in the universe U given by

$U = \{h_1, h_2, h_3, h_4, h_5, h_6\}$ and $E = \{e_1, e_2, e_3, e_4, e_5\}$

Where,

e_1 Positions for the parameter 'expensive',

e_2 Positions for the parameter 'beautiful',

e_3 Positions for the parameter 'wooden',

e_4 Positions for the parameter 'cheap',

e_5 Positions for the parameter 'in the green surrounding'

Assume that,

$F(e_1) = \{h_2, h_4\}$,

$F(e_2) = \{h_1, h_3\}$

$F(e_3) = \{h_3, h_4, h_5\}$

$F(e_4) = \{h_1, h_3, h_5\}$

$F(e_5) = \{h_1\}$

The soft set (F, E) a parameterized group $\{F(e_i), i = 1, 2, 3, \dots, 8\}$ of subsets of the set U and gives as a collection of approximate descriptions of an object. Where each approximation has two measures:

- (i) A predicate p ; and
- (ii) An approximate value - set v .

With example, we show

- (i) The predicate name is “expensive house”, and
- (ii) The approximate value set or value – set is $\{h_2, h_4\}$

Thus, a collection of approximation of a soft set (F, E) can be observed by:

$$(F, E) = \{p_1 = v_1, p_2 = v_2, p_3 = v_3, \dots, p_n = v_n\}$$

Operations with Soft Set Theory

Definition: 1. The class of all value sets of a soft set $\{F, E\}$ is called value – class of the soft set and is denoted by $C_{\{F, E\}}$

Example: 2. $C_{\{F, E\}} = \{v_1, v_2, \dots, v_n\}$, Clearly $C_{\{F, E\}} P(U)$

Definition: 2. For two softs sets (F, A) and (G, B) a common universe U , we say that (F, A) is a soft subset of (G, B) if

- (i) $A \subset B$, and
- (ii) $\forall \epsilon \in A, F(\epsilon)$ and $G(\epsilon)$ are identical approximations.

We write $(F, A) \subset (G, B)$. (F, A) is said to be a soft super set of (G, B) , if (G, B) is a soft subset of (F, A) , we denote it by $(F, A) \supset (G, B)$.

Definition: 3. Equality of Two Soft Sets - Two soft sets (F, A) and (G, B) over a common universe U are said to be soft equal if (F, A) is a soft subset of (G, B) and (G, B) is a soft subset of (F, A) .

Example : 3. Suppose $A = \{e_1, e_2, e_3\} \subset E$, and $B = \{e_1, e_2, e_3, e_5\} \subset E$. Clearly $A \subset B$. Let (F, A) and (G, B) be two soft sets over the same universe $U = \{h_1, h_2, h_3, h_4, h_5, h_6\}$ such that

$$G(e_1) = \{h_2, h_4\}, G(e_2) = \{h_1, h_3\}, G(e_3) = \{h_3, h_4, h_5\}, G(e_5) = \{h_1\}$$

And

$$F\{e_1\} = \{h_2, h_4\}, F(e_3) = \{h_3, h_4, h_5\}, F(e_5) = \{h_1\}$$

Therefore, $(F, A) \subset (G, B)$

Definition: 4. Not Set of A Set of Parameters - Let $E = \{e_1, e_2, e_3, \dots, e_n\}$ be a set of parameters. The NOT set of E denoted by $\neg E$ is defined by

$$\neg E = \{\neg e_1, \neg e_2, \neg e_3, \dots, \neg e_n\} \text{ where } e = \text{not } e_i, \forall i,$$

Example: 4. Here, $\neg E = \{\text{not expensive; not beautiful; not wooden; not cheap; not in the green surroundings; not modern; not in good repair; not in bad repair}\}$

Definition: 5. Complement Soft Set of A Soft Set. The complement of a soft set (F, A) is defined $(F, A)^c$ and is defined by $(F, A)^c = (F^c, \neg A)$ where $F^c \neg A : P(U)$ is a mapping which

is defined $F^c(\alpha) = U - F(\neg\alpha), \forall \alpha \in \neg A$.

We say F^c to be the soft complement function of F . Clearly, $(F^c)^c$ is the same \rightarrow as F and $((F, A)^c)^c = (F, A)$

Example 5 : Here, $(F, E)^c = \{\text{not expensive houses} = \{h_1, h_3, h_5, h_6\}, \text{not beautiful houses} = \{h_2, h_4, h_5, h_6\}, \text{not wooden houses} = \{h_1, h_2, h_6\}, \text{not cheap houses} = \{h_2, h_4, h_6\}\}.$

Definition: 6. Relative Complement Soft Set of A Soft Set- The relative complement of a soft set (F, A) is denoted by $(F, A)^c$ and is defined by $(F, A)^c = (F^c, A)$ where $F^c : A \rightarrow P(U)$ is a mapping given by $F^c(\alpha) = U - F(\alpha) \forall \alpha \in A$.

Definition: 7. Null Soft Set - A soft set (F, A) over U is said to be NULL soft set denoted by ϕ , if for all $\epsilon \in A, F(\epsilon) = \phi$ (null-set).

Example: 6. Let,

U = The set of wooden houses under consideration,

E = The set of parameters.

Suppose there be three houses in the universe U given by

$U = \{h_1, h_2, h_3\}$ and $A = \{\text{brick, muddy, steel}\}$

The soft set (F, A) the “construction of the house”. The soft sets (F, A) is defined as,

$F(\text{Brick})$ = the brick built houses,

$F(\text{Muddy})$ = the muddy built houses,

$F(\text{Steel})$ = the steel built houses,

The soft set (F, A) is the collection of approximations as below:

$(F, A) = \{\text{Brick built houses} = \phi, \text{muddy built houses} = \phi, \text{steel built houses} = \phi\}$

Here, (F, A) is NULL Soft set.

Definition: 8. Absolute Soft Set- A soft set (F, A) over U is said to be absolute soft set denoted by A , if for all $\epsilon \in A, F(\epsilon) = U$.

Obviously, $A^c = \phi$ and $\phi^c = A$

Example: 7. Suppose that,

U = the set of wooden houses under consideration,

B = The set of parameters.

Suppose there be three houses in the Universe U given by

$U = \{h_1, h_2, h_3\}$ and $B = \{\text{not brick, not muddy, not steel}\}$

The soft set (G, B) describes the “construction of the house”. The soft sets (G, B) is defined as,

$G(\text{Not Brick})$ = the houses not built by bricks,

$G(\text{Not Muddy})$ = the houses not built by muddy,

$G(\text{Not Steel})$ = the houses not built by steel,

The soft set (G, B) is the collection of approximations as below:

(G, B) {not Brick built houses} = $\{h_1, h_2, h_1\}$, muddy built houses = $\{h_1, h_2, h_3\}$, steel built houses = $\{h_1, h_2, h_3\}$

The soft set (G, B) is the absolute soft set.

We represent the concept of AND and OR operations on two soft sets as given below:

Definition: 9. And Operation on Two Soft Sets - If (F, A) and (G, B) be two sets then " (F, A) AND (G, B) " denoted by $(F, A) \wedge (G, B)$ is defined by

$(F, A) \wedge (G, B) = (H, A \times B)$, where $H(\alpha, \beta) = F(\alpha) \cap G(\beta)$, $\forall (\alpha, \beta) \in A \times B$.

Example: 8. Suppose that $U = \{h_1, h_2, h_3, h_4, h_5, h_6\}$, $A = \{\text{Very costly; Costly; Cheap}\}$ and, $B = \{\text{Beautiful; expensive; in green surrounding}\}$

Let $F\{\text{Very costly}\} = \{h_2, h_4\}$, $F\{\text{costly}\} = \{h_1, h_5\}$, $F\{\text{cheap}\} = \{h_3, h_6\}$ and

$G\{\text{Beautiful}\} = \{h_2, h_5, h_6\}$, $G\{\text{expensive}\} = \{h_1, h_5, h_4\}$, $G\{\text{in green surrounding}\} = \{h_2, h_4, h_6\}$

Then $(F, A) \wedge (G, B) = (H, A \times B)$, where $H\{\text{Very costly, Beautiful}\} = \{h_2\}$, $H\{\text{Very costly, Expensive}\} = \{h_4\}$, $H\{\text{Very costly, in green surrounding}\} = \{h_2, h_4\}$, $H\{\text{Costly, beautiful}\} = \{h_6\}$, $H\{\text{Costly, Expensive}\} = \{h_1, h_5\}$, $H\{\text{Costly, in green surrounding}\} = \{\emptyset\}$, $H\{\text{Cheap, Beautiful}\} = \{h_6\}$, $H\{\text{Cheap, Expensive}\} = \{\emptyset\}$, $H\{\text{Cheap, in green surrounding}\} = \{h_6\}$

Definition: 10. Or Operation on Two Soft Sets - If (F, A) and (G, B) be two soft sets then " (F, A) OR (G, B) " denoted by $(F, A) \vee (G, B)$ is defined by

$(F, A) \wedge (G, B) = (O, A \times B)$, where $\theta(\alpha, \beta) = F(\alpha) \cup G(\beta)$, $\forall (\alpha, \beta) \in A \times B$.

Example: 9. Consider above example: 8. Suppose that $U = \{h_1, h_2, h_3, h_4, h_5, h_6\}$, $A = \{\text{Very costly; Costly; Cheap}\}$ and $B = \{\text{Beautiful; expensive; in green surrounding}\}$

Let $F = \{\text{very costly}\} = \{h_2, h_4\}$, $F \{\text{Costly}\} = \{h_1, h_2\}$, $F \{\text{Cheap}\} = \{h_3, h_6\}$ and $G \{\text{Beautiful}\} = \{h_2, h_5, h_6\}$, $G \{\text{Expensive}\} = \{h_1, h_4, h_1\}$, $G \{\text{in green surrounding}\} = \{h_2, h_4, h_6\}$

Then $(F, A) (G, B) = (O, A \times B)$, where $O \{\text{Very costly, Beautiful}\} = \{h_1, h_2, h_4, h_5\}$, $O \{\text{Very costly, expensive}\} = \{h_1, h_2, h_4, h_5\}$, $O \{\text{Very costly in green surrounding}\} = \{h_2, h_4\}$, $O \{\text{costly, in green surrounding}\} = \{h_1, h_2, h_4, h_5, h_6\}$, $O \{\text{cheap, beautiful}\} = \{h_2, h_3, h_5, h_6\}$, $H = \{\text{cheap, expensive}\} = \{h_1, h_3, h_4, h_5, h_6\}$, $H \{\text{cheap, in green surrounding}\} = \{h_2, h_4, h_5, h_6\}$

Definition: 11. Union of Two Soft Sets - Union of two soft sets of (F, A) and (G, B) over the common universe U is the soft set (H, C) , where $C = A \cup B$ and $e \in C$.

$$\begin{aligned} H(e) &= F(e), & \text{if } e \in A - B \\ &= G(e) & \text{if } e \in B - A \\ &= F(e) \cup G(e), & \text{if } e \in A \cap B \end{aligned}$$

We write $(F, A) \tilde{\cup} (G, B) = (H, C)$

Definition: 12. Intersection of Two Soft Sets - Intersection of two soft sets (F, A) and (G, B) over a common universe U is the soft set (H, C) where $C = A \cap B$,

and $\forall e \in C, H(e) = F(e) \text{ or } G(e)$, (as both are same set)

We write $(F, A) \tilde{\cap} (G, B) = (H, C)$

We illustrate in **Theorem 1** how De Morgan's forms of results hold in soft set theory for AND – operation, OR – operation.

Theorem 1 Let (F, A) and (G, B) be two soft sets over the same universe U . Then we have the following:

- (i) $((F, A) \vee (G, B))^c = (F, A)^c \wedge (G, B)^c$
- (ii) $((F, A) \wedge \text{Proo}(G, B))^c = (F, A)^c \vee (G, B)^c$

Proof

(i) Suppose that,

$$(F, A) \vee (G, B) = (O, A \times B)$$

Therefore, $((F, A) \vee (G, B))^c = (O, A \times B)^c = (O^c, \neg A \times B)$, Now,

$$(F, A)^c \wedge (G, B)^c = (F^c, \neg A) \wedge (G^c, \neg B)$$

$$= J(\neg A \times \neg B), \text{ where } J(x, y) = F^c(x) \cap G^c(y) \\ = (J, (\neg A \times B))$$

Now take $(\neg\alpha, \neg\beta) \neg(A \times B)$

Therefore,

$$O^c(\neg\alpha, \neg\beta) = U - O(\alpha, \beta)$$

$$= U - [F(\alpha \cup G(\beta))], \\ = [U - F(\alpha)] \cap [U - G(\beta)], \\ = F^c(\neg\alpha) \cap G^c(\neg\beta), \\ = J(\neg\alpha, \neg\beta)$$

$= O^c$ and J are same. $((F, A) \vee (G, B))^c = (F, A)^c (G, B)^c$

Hence Proved

(ii) Suppose that,

$$(F, A)(G, B) = (H, A \times B)$$

Therefore, $((F, A)(G, B))^c = (H, A \times B)^c = (H^c, \neg(A \times B))$

Now,

$$(F, A)^c \vee (G, B)^c = (F^c, A) \vee (G^c, \neg B)$$

$$= (K, A \times \neg B), \text{ where } \\ K(x, y) = F^c(x) \cup G^c(y), \\ = (K, \neg(A \times B))$$

Now take $(\neg\alpha, \neg\beta) \varepsilon \neg(A \times B)$

Therefore,

$$H^c(\neg\alpha, \neg\beta) = U - H(\alpha, \beta)$$

$$= U - [F(\alpha) \cap G(\beta)] \\ = [U - F(\alpha)] \cup [U - G(\beta)], \\ = F^c(\neg\alpha) \cup G^c(\neg\beta), \\ = K(\neg\alpha, \neg\beta)$$

$= H^c$ and K are same. Hence Proved.

We can proof following results are obvious with the help of previous definition.

Propositions

1. $\neg(\neg A) = A$.
2. $\neg(A \cup B) = (\neg A \cup \neg B)$
3. $\neg(A \cap B) = (\neg A \cap \neg B)$.

Discussion and Conclusion

In this paper, we have presented a detailed theoretical study of operations on soft sets. We have researched the algebraic properties of them and study over their interrelation between each other. We have solved De Morgan's law holds in soft set theory with different operations and proved operations on soft set theory with am illustrative examples. For future study we will do more mathematical concepts on soft set theory.

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