

## ADVERTISING ONLINE-DOES IT PAY?

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### Abstract

Advertising is an integral part of marketing communication, and online business is no exception. The success on web has eluded most of the e-marketers, therefore decisions on investments are to be more judicious. There is a need to study how the customers perceive online advertising. There are opinions voiced, decisions made based on the research. The effort in this paper is to study the perception of customers towards online advertising, in order to infer whether it pays to advertise online or not. The interesting aspect is to study the preferences of the customers in terms of quality, low price, etc, that they demand when they reach the product advertised to them.

### Introduction

Advertising online is a dimension which has acquired magnitude that is unimaginable. Online world is intriguing. It has various dimensions to it. Out of the three sources of revenue for the websites viz. products, services and advertising space, Advertising Space is considered the most significant one. The marketers are always in need of understanding the customer better so as to justify the expenditures made when the revenues are not much. The sales online have not picked up as the marketers would have wanted it to be. Marketers are always pressed upon for budget, therefore it makes it interesting to whether investing in online advertising is worthwhile or not. Advertising conveys the messages used to communicate with the desired market. Marketing communication relies on a blend of options called promotional mix (advertising, personal selling, direct marketing and internet /e-commerce). The online medium provides a new way of communicating to the target customer. Every company wanted to utilize it as a new extension of marketing communication. Role of e-commerce in marketing communication cannot be undermined since the number of internet users has reached 2 billion mark worldwide in 2011 as compared to 250 million in the year 2000.(as quoted by UN's telecommunication agency, Hamadoun Toure, Source: [www.physorg.com](http://www.physorg.com)). With so many people online and more joining in everyday, Internet serves as an effective tool to reach them by exploiting the various amazing advantages provided by it. Therefore it is of prime importance to study how the customers perceive advertising online, so as to optimize the investment in the same. Also, since advertising is only a vehicle to get the customers know about the product, what is demanded in addition to this is also of importance, in order to understand the customers.

### Need and Objectives of Study

The research on customers, always benefits the marketers, since it offers them

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insight into what their opinion or perceptions are. Advertising is an important part of communicating to the desired audience; the online advertising has become an essential too. The marketers are perplexed by the paucity of response towards the e-commerce transactions and are trying to balance the available monetary funds. The study tries to answer the same by evaluating the responses of the customers towards various aspects of online advertising through statements framed for the purpose. The specific objectives of the study are:

- i) To study the customers perceptions towards online advertising in particular.
- ii) To find out how the customers perceive other functions of e-commerce like providing information, comparative shopping and online advertising's comparison with traditional advertising.
- iii) To evaluate the significant options in support of online advertising demanded by the customers.

The effort is study the customer's perception towards online advertising so that the expenditure can be justified.

### **Review of Literature**

The researchers and research agencies in different countries have undertaken studies related to Online Advertising. The studies reviewed in this section have been selected to bring to light various features related to Advertising on the web. These include studies conducted by HotWired Inc and Millward Brown International (1996), Doyle, Minor and Weyrich (1997), Mbinteractive (1997), E-evaluation research(1999), etc.

Hot Wired Inc and Millward Brown International conducted the HotWired 1996: Advertising effectiveness study to examine whether banner ads also work in the traditional sense. The study tested a single exposure to an advertisement at three pre-existing levels of advertising weight, which ranged from a brand that had never been advertised on the web to a brand whose advertisement was ubiquitous. For this purpose the HotWired users were studied and it was found that the banner ads made a significant impact on their viewers. An impact that demonstrably built the advertised brand, even upon first impression. Every ad impression is important.

Banner Ad Placement study conducted by Kim Doyle, Anastasia Minor and Carolyn Weyrich for [www.webreference.com](http://www.webreference.com) (1997) to determine if location played an important role in click-through rates. Online visitors at webreference.com were studied for the purpose. They found that Ads next to the right scroll bar (in the lower right hand corner of the screen) generated a 228% higher click-through rate than ads on the top of the page; Ads placed 1/3 down the page, as opposed to the top, generated 77% higher click-through rates; results from placing two ads on a page (at top and bottom) were inconclusive.

Mbinteractive(1997) conducted the Internet Advertising Bureau(IAB) online advertising effectiveness study in United States in order to value the advertising impact of online communications, since much of what is known and predicted about the medium is within the context of direct marketing. Also, to provide data in a form that tested the medium's ability to move the traditional marketing communication measures of advertisement awareness , product attribute communication and purchase intent.

For this purpose the web customers of CNN, CompuServe, ESPN SportsZone, Exite, Geosites, HotWired, Looksmart, Lycos, Mac World, National Geographic online, Pathfinder and Ziff-Davis were studied. The responses were measured on a five point scale ranging from "strongly in favor of" to "strongly against".

The study revealed in the first place that consumer awareness of online advertising is comparable to that of traditional media. Secondly, online advertising dramatically increases advertisement awareness after only one exposure. Thirdly, web advertising boosted awareness of advertised brands and it provided significant brand communication power. Fourthly, online advertising had the potential to increase sales and online advertising was more likely to be noticed than TV advertising. Finally, click-throughs were not necessary for impactful brand communication; in fact, click-throughs didn't add very much.

A study was conducted by E-Valuations Research(1999) on 'Inside the heads of online consumers' to measure the impact of online ads "beyond click throughs and without cookies'. For this purpose 40,000 web users in US (Seattle) were studied. The findings were that more often an ad is experienced , more likely its message will be retained. Ad-recall rates were higher among the users under 35 years of age. Consumers who viewed an ad were 3 times more likely to purchase the advertised brand than those who didn't remember seeing online ad campaign. Purchase intent was as high as 45 % among those who recalled an online ad. Brand awareness of new names was greater than the established names. Intent to purchase advertised online brands was a little higher than that of advertised offline brands mainly due to easier access of online brands. Intent to purchase new brands that advertised online was also a little higher than that of offline brand.

Computer Economics (1999) in its article 'Online Advertising , One Size doesn't Fit All' with the objective of studying advertisements run on 6 niche market sites in US. It found out that marketers were not taking full advantage of web's targeting capabilities by neglecting the niche market like ethnic groups and women. Majority of advertising placed on sites featuring women-targeted content was not tailored for audience. Also of the other niche sites studied, over half the advertisements were generalized mass -market ads with no particular target. Ernst and Young's first online retailing survey showed that majority of online shoppers were women. Women made up for 46% of Internet users in US as per e-marketer's e-User and Usage report. NetSmart America reported ,58% of new internet users in US were women and at these growth levels, women would lead men in

Internet access in the time to come.

### **Data base and Methodology**

Keeping into consideration the objectives of the study a structured questionnaire was prepared which was pre-tested on 30 respondents, who were active in using web for various purposes. The questionnaire was administered to 317 respondents from Punjab (cities of Amritsar, Jalandhar, Ludhiana and Chandigarh) and New Delhi. Judgement sampling was adopted in selecting the respondents because only those were to be contacted who were surfing the web frequently and were comfortable in using it. Judgement sampling is justified for exploratory studies (see Churchill 1979).

The questionnaire was administered to the respondents in two ways. Firstly, where it was possible the researchers got the questionnaire filled from the respondents personally. Some respondents gave the email addresses of people who fit in the requirements of the study. So for collecting data from them, web based questionnaire was designed and emailed to them.

In all 300 usable questionnaires have been considered for this study. Of these 300 respondents, 160 were males and 140 females; 186 belonged to Punjab (60 from Amritsar, 47 from Jalandhar, 30 from Ludhiana and 49 from Chandigarh) and 114 were from New Delhi; 201 were of less than 25 years of age and 99 were in the age group of 25-45 years. Thus the sample is representative of both males and females, customers of varied age groups and belonging to the major cities of Punjab and New Delhi. The analysis has been done by calculating Weighted Average Score and interpreting the same.

### **Findings**

World Wide Web as a medium of advertising is being used extensively. Advertising also forms major part of the revenue stream for the web sites, so it necessitates the need to study the perception of customers regarding the same.

The first and second objectives are studied through the set of statements framed for the purpose. The online advertising faces competition from the traditional advertising.

A set of ten statements was framed which show the use of www as a medium of advertising by the companies. The respondents were asked to rate each statement on a five point scale (Strongly Agree(SA).....Strongly disagree (SDA)). The WAS for each statement has been calculated by assigning weight from 5 to 1 for SA .....to SDA.

Table A presents the response of the respondents as regards these 10 statements and their corresponding WAS.

**Table A: Perceptions of Customers Regarding Advertising Online**

| No. of respondents<br>Statements                                                                                                                                                                  | SA         | A          | NAND      | D         | SD       | WAS  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|------------|-----------|-----------|----------|------|
| <b>Statements of moderate agreement level</b>                                                                                                                                                     |            |            |           |           |          |      |
| a) Comparative prices of the various products should be given to make the shopping experience easier.                                                                                             | 133(44.33) | 147(49.00) | 14(4.67)  | 5(1.67)   | 1(0.33)  | 4.35 |
| b) If "Satisfaction guaranteed" or "money back guarantee" are typically made as a part of an overall sales pitch, and the marketer does not mean them, they'll lose me as their customer forever. | 153(51.00) | 101(33.66) | 35(11.67) | 8(2.67)   | 3(1.00)  | 4.31 |
| c) In the era of web, it is better to concentrate on customer service rather than advertising.                                                                                                    | 70(23.33)  | 116(38.67) | 76(25.33) | 36(12.00) | 2(0.67)  | 3.72 |
| d) Online advertising has the potential to increase sales.                                                                                                                                        | 41(13.67)  | 154(51.33) | 84(28.00) | 19(6.33)  | 2(0.67)  | 3.71 |
| e) I think most customers in future would locate the company through the internet, as opposed to the print ads.                                                                                   | 40(13.33)  | 150(50.00) | 73(24.34) | 31(10.33) | 6(2.00)  | 3.62 |
| f) Web advertising boosts the awareness of advertised brands.                                                                                                                                     | 21(7.00)   | 163(54.33) | 57(19.00) | 57(19.00) | 2(0.67)  | 3.48 |
| g) Click-throughs are necessary for the impactful brand communication.                                                                                                                            | 25(8.33)   | 158(52.66) | 98(32.67) | 17(5.67)  | 2(0.67)  | 3.48 |
| h) Customers have accepted online advertising in the same way as traditional.                                                                                                                     | 25(8.33)   | 107(35.67) | 61(20.33) | 92(30.67) | 15(5.00) | 3.12 |

**Statements of least agreement level**

|                                                                                                                       |         |           |           |                |               |      |
|-----------------------------------------------------------------------------------------------------------------------|---------|-----------|-----------|----------------|---------------|------|
| i) I feel the customer's intent to buy an online advertised brand is higher than that of an offline advertised brand. | 8(2.67) | 64(21.33) | 89(29.66) | 134<br>(44.67) | 5(1.67)       | 2.79 |
| j) Customers note online ads more than the T.V.ads.                                                                   | 8(2.67) | 41(13.67) | 68(22.66) | 153<br>(51.00) | 30<br>(10.00) | 2.48 |

(Figures in parenthesis show percentages)

It can be observed that there are no statements, which are of high agreement level, two statements are of moderate agreement level, six are of slight agreement level and two of least agreement level.

93.33 percent of the respondents agree that 'Comparative prices of various products' should be given as, WAS is 4.35 (93.33%) which is quite high. This would help them in making their buying decision. The customers strongly feel that if they are cheated like if "If "Satisfaction guaranteed " or "money back guarantee" are typically made as a part of an overall sales pitch, and the marketer does not mean them, they'll lose them as their customer forever", WAS 4.31(84.66%).

Customers agree with the fact that companies should rather 'concentrate on customer service instead of advertising', (WAS of 3.72). This is because, at any cost the customer wants to be provided with the best services. At the same time, the customer also feels that 'online advertising has the potential to increase sales', (WAS 3.71). This shows that though the customers feel that online advertisement is important for the marketer but when compared to their own service, they want to be served better.

'Customers note online ads more than the T.V.ads', (WAS 2.48), and the 'customer's intent to buy an online advertised brand is higher than that of an offline advertised brand' (WAS 2.79), carry little value for the customers.

The respondents want everything to their advantage and that has been established through the analysis of last few questions as well. They want 'comparative prices of the products/services', they feel that if they are not treated properly by the marketer, they will lose faith in them forever, they believe that 'customer service should be concentrated upon rather than advertising but at the same time, they believe that 'online advertising has the potential to increase sales'. They feel that the acceptability of the medium is to grow in future and most of the 'customers would locate the company through internet rather than print ads'. Online advertising also supports brand building. The customers agree with the

fact that ‘customers have accepted online ads in the same way as traditional’, which supports their belief that online advertising has the potential to increase sales. The respondents believe that ‘web advertising boosts the awareness of the advertised brands’ but they agree equally with the fact that ‘‘click-throughs’ are necessary for brand communication’, thereby implying that unless the customer click through the advertisement, impactful brand communication cannot be there.

In order to study the third objective viz., to evaluate the significant options in support of online advertising demanded by the customers. Customers were asked to rank the features that they look for in the product or service, in addition to online advertising, that is available on the web i.e. the features that would induce them to buy through the web, supported by advertising. Six features were identified and enlisted and the customers were to rank them, assigning rank one to the most important feature and six to the least important one, the WAS has been calculated, to finally decide which feature is of most importance to the customer.

The table B shows the rank that the respondents assign to the various decisive factors for buying through the web and the weighted average score (WAS) calculated for the same.

**Table B: Features in Addition to Advertising**

| No. of respondents<br>Features               | Rank1      | Rank2     | Rank3     | Rank4     | Rank5     | Rank6     | WAS  |
|----------------------------------------------|------------|-----------|-----------|-----------|-----------|-----------|------|
| a) right quality                             | 109(36.34) | 78(26.00) | 40(13.33) | 34(11.33) | 29(9.67)  | 10(3.33)  | 4.58 |
| b) low price                                 | 57(19.00)  | 58(19.33) | 70(23.33) | 46(15.34) | 27(9.00)  | 42(14.00) | 3.82 |
| c) payment security                          | 10(3.33)   | 60(20.00) | 90(30.00) | 65(21.67) | 53(17.67) | 22(7.33)  | 3.48 |
| d) timely delivery                           | 54(18.00)  | 47(15.67) | 24(8.00)  | 49(16.33) | 87(29.00) | 39(13.00) | 3.38 |
| e) reasons to trust<br>business people       | 47(15.67)  | 30(10.00) | 29(9.67)  | 46(15.33) | 49(16.33) | 99(33.00) | 2.94 |
| f) a place to reach in<br>case of difficulty | 24(8.00)   | 27(9.00)  | 49(16.33) | 62(20.67) | 52(17.33) | 86(28.67) | 2.84 |

(Figures in parenthesis show percentage)

Table B, shows that 109(36.34%) customers assign rank one (WAS 4.58) to the ‘right quality’ of the product/service that they intend to buy. This indicates that they would not like to compromise with the quality. ‘Low price’ is ranked second as the customers always look for best bargains in the form of low price, (WAS 3.82). ‘Payment security’ is also ranked quite high i.e. at third level (WAS 3.48) followed by ‘timely delivery’ (WAS

3.38). This shows that the customers would buy on the web only if they are provided with the essential features of 'right quality', 'low price', 'secure environment for making payment' and 'timely delivery'. However 'reasons to trust business people' (WAS 2.94) and 'a place to reach in case of difficulty' are ranked the lowest (WAS 2.84).

In a nutshell it can be inferred that when analysed on the basis of their expectations from products/ services, preference for right quality substantially exceeds the preference for other features. Accompanied by online advertising, the customers perceive the right quality combined with low price, secure environment to make payment and finally getting a timely delivery is what the respondents expect from the marketer. And if delivered, online advertising would be successful and justify the expenditure made in it.

### Conclusion

Advertising is essentially an integral part of E-commerce. Consumers go online to make comparative shopping decisions and would not tolerate false sales pitch. Through the analysis, the customers convey that though they have accepted online advertising but it cannot replace offline media whether it is to build brand awareness or to get noticed or to create awareness. Therefore, online advertising needs to be complemented with TV, radio ads but marketers cannot do without online advertising-It pays.

Online advertising supported, in order, by right quality combined with low price, secure environment to make payment and finally making a timely delivery is what the customers expect should be delivered to them. Therefore, decision should be to make judicious use of funds and advertise online.

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# **Rural Savings and its Investment in Manipur**

## *A Case Study of Formal Finance vis-à-vis Marups*

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### **Abstract**

The main success factor of the informal sector finance in Manipur is due to its nexus to social and conventional relevance. 'Marups' is one of the most successful informal sector financial networks in Manipur which can be defined as the group finance or group lending system. This age-old Marup of women accommodates itself to the different socio-economic options available during their life cycle of a woman. Thus, the 'Marup' system is an important and effective socio-economic organization, which provides security to every individual at every stage of his or her life. The present study of saving and its investment pattern in rural areas has tried to identify some of the important issues relating to the formal finance and Marups for the economic development of rural areas. The paper comes up with some of the suggestions which may improve the climate for savings and its investment in the state.

Key Words: Marups, Formal Finance, Informal Finance

### **1.1 Introduction**

India is basically a rural based agricultural country where 80 percent of the total population is, living in rural areas. In Manipur, one of the eight states of the Northeast India, around 87 percent of the total population is living in rural areas. Therefore, it is very important to uplift the economic life in rural people to make India a developed country. This is possible only through increasing the rate of saving and proper investment of the people of rural areas.

'Savings' is an indispensable word for measuring economic behaviour of human beings. We observe that insect like ant has the urge of saving for rainy season. Again snake also uses to save for winter season. As the human being is a superior creature among all creatures, therefore, saving is innate by nature.

Before analysing the pattern of saving and its investment it is important to bring some facts to light about the word 'Saving and Investment'. 'Saving' are the unconsummated earning of an individual consumption and capital formation including investment. Again saving may be defined as changes in earned surplus or earned net worth of an economic unit. National saving constitutes the sum of net changes in the net worth of all economic units in an economy. Saving has been defined by C.S.O. as the excess of current income over current expenditure and is the balancing item on the income and outlay accounts of producing enterprises and households government administration and other final consumers.

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For the estimation of domestic saving, the whole economy is broadly classified into three institutional sectors i.e., (a) household (b) private corporate and (c) public. The saving of the household sector can be measured by (i) total financial saving and (ii) saving in the form of physical assets. The financial saving includes possession of currency, net deposit, investment in shares, debentures and govt. securities and small saving whereas the physical assets include machinery, equipment, construction, inventories etc. held by an individual. Secondly, the saving of the private corporate sector constitutes the net saving of non-government, non financial companies, private financial institutions and co-operative institutions as revealed from the profit and loss accounts and balance sheet of these companies. Thirdly, the saving of the public sector includes the net savings of both department and non-department shown as the excess of current expenditures of the government. Likewise investment may be defined as deployment of funds in any type of economic activity for further return. It generates fund for future, which helps in the development of economy of a country.

## 1.2 Literature review

The informal sector finance provides various valuable financial services to the people of Manipur who otherwise would not have recourse to any other source. The illiterate as well as highly literate population of the state is attached to this system of financial services rather than they do in the formal sector financial services. It is therefore very important to understand the operations of the sector. At the same time, the present position of banks in Manipur is very poor and people have lost confidence in banks. People have to make long queues for realization of a small cheque in Imphal itself, whereas 22 sub divisions in tribal areas don't have banks at all. The main success factor of the informal sector finance in Manipur is due to its nexus to social and conventional relevance. 'Marups' is one of the most successful informal sector financial networks in Manipur which can be defined as the group finance or group lending system This age-old Marup of women accommodates itself to the different socio-economic options available during their life cycle of a woman. Thus, the Marup system of Manipur is an important and effective socio-economic organization, which provides security to every individual at every stage of his or her life. As banks and other formal sectors, financial institutions are absent or in some cases not within the reach, people have less knowledge of its benefits. However, this traditional system of Marup institution, which is meant for mutual help, is the only institution that can provide these saving and lending opportunities. Various studies in this regard have been done, notably by Singh, W. C. (2009)<sup>1</sup>, Singh, Mohendro (2011)<sup>2</sup> and Khuraijam, Bijoykumar<sup>3</sup>.

Market failures in rural finance and related issues of adverse selection, moral hazard, and transaction costs justify targeted interventions to ensure that services reach the poor and the un-banked sustainably (Gobezie, Getaneh: 2008)<sup>4</sup>. Burkell, Paul's paper (1988)<sup>5</sup> surveys also stated the informal finance may help to maintain the flexibility and adaptability

of the financial system after the transition to a more efficient regulatory regime.

Similarly, the report (2001)<sup>6</sup> of the National Statistical Commission chaired by Dr. C. Rangarajan states that the structure of informal financial market is extremely heterogeneous. This sector comprises partnership firms, sole proprietary concerns, own account enterprises, financial auxiliaries such as share broking firms, loan brokers, Non-Governmental Organizations (NGOs) helping Self-Help Groups (SHGs), share brokers and traders, *multani shroffs*, *pawnbrokers*, *chettians*, etc. Comparing between formal and informal financial institutions, Marios Obwona *et. al* (1998)'s study<sup>7</sup> reveals that some interaction between the formal financial institutions (FFIs) and the informal financial institutions (IFIs) exist in the area of savings mobilization. Direct credit links are less significant, while the intermediary role for the informal financial institutions between borrowers and the FFIs is very weak and limited. Shaheel Rafique<sup>8</sup> (2006)'s study concludes that, although the informal sector is acknowledged in policy, it is not clear as to how the formal sector should operate in the presence of the informal sector, where the activities of a professional moneylender is a good example. Element of linkages may also be present between these two forms of finance. These linkages were observed both in savings mobilization and credit allocation (Aryeetey, 1992<sup>9</sup>; Chipeta and Mkandawire, 1992<sup>10</sup>). What is not yet clear is how significant these linkages are for the development of the entire financial sector in the economy, and therefore the extent to which action taken in one financial sector may have repercussion in another.

On the other hand, the majority of people living in rural and semi-urban parts of India lack knowledge of the financial markets and fail to understand them. Studies, such as that conducted by SEBI (Security Exchange Board of India), reveal that gold, either in primary or in jewellery form, still remain the second most preferred option among the Indian public after deposits in the banks. There were 850 tonnes of gold consumed in India last year, and it is estimated that there are 13,000 tonnes of gold in private hands, which is currently not part of the mainstream economy (Gupta, Narendra, 2003)<sup>11</sup>. Rural households saved their income in both monetized as well as non-monetized forms. Moreover, some of the monetized savings are held in the form of physical assets. Thus, only those monetized savings which are invested in financial assets of the informal rural financial market (RFM) can be considered as potentially mobilisable by the financial agencies. Institutionalization of such savings would improve their efficiency by promoting better allocation among different areas, sectors, economic activities, and also to entrepreneurs (Desai, B.M, 1983)<sup>12</sup>. To identify appropriate policies, further literature may be developed by promoting and researching programmes with better rates of return on financial savings, besides those with opportunities to transact other businesses.

### 1.3 Objectives of the study

The broad objectives of the study are as follows:

- a. To study the rural savings of rural people of Manipur with reference to formal vis-à-vis Marups, an informal finance;
- b. To analyse the determinants of rural savings and its investments;
- c. To offer suggestions for increasing rural saving and its investment so that the economy of the rural people may improve in the state of Manipur.

#### **1.4 Significance of the study**

The study of saving and its investment pattern in rural areas will try to identify some of the important issues relating to the economic development of rural areas of Manipur. Though the study will be confined to the state of Manipur, the findings shall be equally applicable to all over the country. The researcher has tried to carry out the message of trend of economic development in micro level, which can also be widened to macro level. The findings of the present study will help policy-makers to formulate economic policy for the socio-economic development of a land-locked and backward economy like North East India in general and Manipur in particular. At the same time, the present findings of the study will immensely help the various financial institutions working in the state to formulate their investment policy in agro-based rural economy.

#### **1.5 Research design**

The present paper is part of the study<sup>1</sup> which was purely based on the primary data collected from 135 (one hundred and thirty-five) rural households from all the nine districts of Manipur, 4 (four) in the valley and 5 (five) in the hills (15 from each district) through purposive sampling. Regarding formal finance, savings and its investment by the selected rural households in commercial banks, post office, insurance and government securities were taken into consideration. Similarly, savings and its investment by the same households in Marups, an informal way of ROSCAS (rotating savings and credit associations) has been taken into consideration.

Field survey for primary data was conducted between June-September, 2008. The researcher has made all possible effort during the course of data collection and personal interview. Since the target respondents are poor and level of literacy is low maximum effort was made to present the question and issues as real and simplified as possible. But, some gaps might have remained unnoticed. The methodology followed and tools employed in the analysis of the data involved certain merits as well as demerits of their own and also reflect the limitations of the data base. Data pertaining to household income, saving, investment, etc. were gathered from the selected households directly. There were no proper

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<sup>1</sup> Singh, Nixon (2011), '*Pattern of Rural Savings and Its Investment: A Case Study of Manipur*', an unpublished Project Report submitted to ICSSR (North-East Programme), New Delhi

records maintained at the individual level. Thus the information given by the selected head of the households may not be accurate. However, utmost care was taken by the researcher to ensure accuracy, by adopting cross checking methods.

### **1.6 Savings and its investment- Formal Finance vis-à-vis Marups**

Rural households have limited access to formal institutions such as commercial banks, regional rural banks (RRBs) and post offices and they access these institutions' services for specific reasons. Formal institutions, however, remain the most preferred option because they are backed by the government and are, thus, the most secured. Another important reason for why formal institutions are preferred is that a typical general savings account has unlimited withdrawal facility and people feel comfortable with the idea that they can withdraw the money whenever they want. This gives them not only greater liquidity, but also a greater sense that their deposit is safe and secure. In addition to it, one of the major reasons for having a bank account is that opening a self help group (SHG) bank account is a requirement for bank linkages process of the National Bank for Rural and Agricultural Development (NABARD) and non-governmental organisations (NGOs). People also use formal institutions for long-term investments as a way to access loans. People feel that if they have a bank account and establish a relationship with the bank and the staff, it will be easier for them to get loan requests approved. Some household members make use of formal institutions for other purposes, such as for salary withdrawal and for government contract payments. Some other people open accounts for the purpose of receiving and making business payments.

Many a time, lack or difficulty in accessing formal institutions for savings forces people to save in informal institutions. Some informal mechanisms, such as saving cash at home or saving through the purchase of in-kind commodities, have been discussed earlier. Another informal institution worth mentioning is a need-based institution. A need-based institution evolves as a result of the specific needs of the people of the area—for marriages, education, funerals—and is, in many ways, tailored to meet these specific needs. Clients use these institutions because they offer doorstep delivery, easy processes of group formation, deposit collection, high returns, and the possibility of accessing cheaper credit. Often, the repayment schedules are suited to the ability of the people. Some people also use these institutions because they represent a disciplined saving mechanism imposed by the community and are perceived as prestigious. NGOs have played a key role in promoting SHG formation. The amount of savings required is determined by the people involved, providing people with the ability to select amounts that are convenient to them.

A considerable number of economic activities in developing countries are carried out by informal groups. Their success has concerned much public attention of the global world and quite interestingly, knowledge of these groups is of particular importance if we want to understand the potential role for more formal institutions. While these groups may

differ significantly in their organizational structures and functions (insurance, savings, mutual credit, work cooperatives...), they all the following common ideas:

- (i) Participation in these informal groups is voluntary, and
- (ii) They do not and cannot rely on external regulations or enforcements.

Among other informal savings and its investment, the selected rural households' savings and its investment in *Marups*<sup>13</sup> were found to be the highest.

However, very little is known about the mechanisms used by these groups to ensure that members abide by their obligations. Under this section, we focus on rotating savings and credit associations (ROSCAS) which constitute one of the most commonly found informal financial institutions in the developing world.<sup>14</sup>

In India, like most developing countries, the indigenous private sector consists largely of households and small-scale enterprises that operate outside the formal financial system. In this study we use the term 'informal finance' to refer to the operations of all lawful but unregulated entities such as rotating (and non-rotating) saving and credit associations such as *Marups* in Manipur, money-lenders and money collectors and other providers of retail financial services. Its defining characteristic is that it is outside the purview of the legal, fiscal, regulatory and prudential framework of the monetary and financial authorities. It is one of the most successful informal sector financial networks in Manipur. It can be explained as one of the group finance or group lending system 'Rotating Savings and Credit Associations (ROSCAs)'. In Manipur, it is traditionally known as "*Marups*"<sup>15</sup> (which means as friendship in Manipuri language). In Thadou Kuki<sup>16</sup> dialect, *marup* is known as 'Sumlom'. Again, in Tankhul<sup>17</sup> Naga language, it is called 'ngasotnao' or 'khavak'. The real significance of highlighting the *Marup* system is due to the involvement of highly literate groups of people who are already accessed to and enjoyed the hi-tech modern formal financial system. In fact, *Marups* is the age old informal financial system that almost every individual in Manipur involves in some way or the other. This system provides a strong financial network to people who involve directly and indirectly to a business activity as well as in their day to day living.

In short, *Marups* represents coming together of people in the community or society. The main aim is to fulfill different economic and financial needs of the members of the *Marups*. It is one of the easiest methods of mobilizing finance from the individuals in a community or neighborhood or friends or society in a larger context. Informal savings activities in Manipur are widespread but generally self-contained and isolated from those of formal institutions. There is evidence of demand for external finance by rural households that want to expand beyond the limits of self-finance but have historically lacked access to bank credit.

### 1.7 Findings of the study

A rural household consists of many family members. Among the members, their occupations are also different. In the present study, rural households are found to be earning income from various sources. As income are saved and invested, occupation of the selected respondents are very important as one gets his income from his occupation. Government service (41) formed the major occupation (30.4 percent) out of the selected 135 respondents. Forestry, agriculture and business followed later by 27, 25 and 22 respondents respectively. As expected, forestry as an occupation is only found in hill districts of the state. At the same time, the similar is the case of agriculture, which is mainly adopted by the respondents of the valley based districts as a main occupation. District-wise, government service as a main occupation is adopted by the selected respondents evenly in all the districts of the state. On the other hand, Ukhrul district has the highest number of pensioners (3 out of 9) selected for the study. It is pertinent to mention that Tamenglong and Ukhrul districts are not represented by any respondents having occupation of 'others' consisting of other professions not included in the table.

Table-1 discusses the district-wise rural savings and investment in both formal finance and marups which comes under the informal finance. Regarding the formal finance, out of the total sample of 135 rural households, 75 are found to be saving money in commercial banks, 68 in insurance policies, 38 in post office and 10 in government securities. This clearly shows that rural households are not favouring with only one formal mode of savings but with two or more.

**Table-1: District-wise Rural Savings and Investment**

| Name of Districts | Savings and investment by Rural Households in |             |           |                       |           |
|-------------------|-----------------------------------------------|-------------|-----------|-----------------------|-----------|
|                   | Formal                                        |             |           |                       | Informal  |
|                   | Commercial Banks                              | Post office | Insurance | Government securities | Marups    |
| Imphal East       | 8(10.7)                                       | 3(7.9)      | 8(11.8)   | 1(10.0)               | 15 (15.3) |
| Imphal West       | 11(14.7)                                      | 6(15.8)     | 11(16.2)  | 2(20.0)               | 15(15.3)  |
| Thoubal           | 11(14.7)                                      | 5(13.2)     | 10(14.7)  | 3(30.0)               | 15(15.3)  |
| Bishnupur         | 6(8.0)                                        | 5(13.2)     | 7(10.3)   | 1(10.0)               | 15(15.3)  |
| Senapati          | 8(10.7)                                       | 3(7.9)      | 6(8.8)    | 1(10.0)               | 5 (5.1)   |
| Tamenglong        | 6(8.0)                                        | 3(7.9)      | 4(5.9)    | 0(0.0)                | 7 (7.1)   |
| Ukhrul            | 10(13.3)                                      | 6(15.8)     | 7(10.3)   | 1(10.0)               | 9 (9.2)   |
| Churachandpur     | 8(10.7)                                       | 3(7.9)      | 8(11.8)   | 1(10.0)               | 7 (7.1)   |
| Chandel           | 7(9.3)                                        | 4(10.5)     | 7(10.3)   | 0(0.0)                | 10(10.2)  |
| Total             | 75(100.0)                                     | 38(100.0)   | 68(100.0) | 10(100.0)             | 98(100.0) |

Source: Field Survey

Note: Figures in parentheses indicates percentage to total



District-wise, it can be seen that savings in commercial banks is more preferred in Imphal West and Thoubal districts (14.7 percent), followed by Ukhrul (13.3), Imphal East, Senapati and Churachandpur (10.7 percent). In case of Insurance policies as a mode of formal saving, Imphal West (16.2 percent), Thoubal (14.7 percent) and Imphal East and Churachandpur (11.8 percent) districts are found to be well represented by the selected rural households. Post office schemes happens to the third chosen mode of formal mode of savings and in the regard, Imphal West district is found to be the district where 15.8 percent of the selected rural households had chosen post office schemes as the preferred mode of formal savings. Next, it is Thoubal and Bishnupur (13.2 percent) districts and followed by Chandel district where rural households had chosen post office schemes as the preferred formal mode of savings. On the other hand, saving in government securities is also found among the rural households but in less numbers (10).

Comparing with the different modes of rural savings and its investment, the selected rural households' dependence on savings in *Marups* is quite notable. 98 out of the 135 sample rural households are found saving money in the marups. Among them, interestingly, all the rural households from the valley-based districts are found saving money in the marups (15 each). As far as hill-based districts are concerned, 10.2 percent of the rural households from Chandel, followed by that of Ukhrul (9.2 percent), Tamenglong and Churachandpur (7.1 percent each) and Senapati (5.1 percent) districts are found saving in the marups.

When educational qualifications of the respondents are analyzed with that of their households' savings pattern in *Marups*, no trend can be established. Almost all the respondents are equally distributed among the all the different levels of educational qualifications. It clearly shows that 'marups' is popular in the state irrespective of educational qualifications. Last but not the least, except among the pensioners and other professionals (less than 10.0 percent), all other occupational backgrounds of the respondents is found popular for their households to save money in the *Marups*.

### **1.8 Determinants of formal rural savings and its investments**

After analysis of data, it has been observed that unlike the formal rural savings and its investment which have several determinants in the state, *Marups* as an informal rural savings doesn't have any specific determinants. So, an attempt has been made to find out the various determinants which can affect formal rural savings and its investment significantly or insignificantly as the case may be. These results are based on *binary logit model*.

#### **a. Formal rural savings and its investments-rural occupations**

Here, an effort has been made to find out the determinants of the formal rural

savings and its investment as regards to various rural occupations. The above said model has found that if the occupation of the respondents is Govt. employee, it increases the chance/probability of investing in commercial banks, post offices, insurance and govt. securities. Respondents' occupation as agriculture and forestry decreases the probability of investing in commercial banks, post offices and insurance (Table-2). On the other hand, households of the respondents with the occupational backgrounds of business and pensioner has nothing to do with either saving or not saving and its investment in commercial banks, post office and insurance.

**Table-2: Determinants of Formal Rural Savings and its Investments-Rural Occupations**

| Dependent Variable             | Variables with      |                          | Insignificant variable                        |
|--------------------------------|---------------------|--------------------------|-----------------------------------------------|
|                                | Positive Impact     | Negative Impact          |                                               |
| Investment in Commercial Banks | Government Employee | Agriculture and Forestry | Business and Pensioner                        |
| Investment in Post Office      | Government Employee | Agriculture and Forestry | Business and Pensioner                        |
| Insurance                      | Government Employee | Agriculture and Forestry | Business and Pensioner                        |
| Government Securities          | Government Employee |                          | Business, Agriculture, Pensioner and Forestry |

Source: Reproduced from Appendices

#### **b. Formal rural savings and its investment- Income from rural occupations**

Further, the attempt has been made on finding the determinants of formal rural savings and its investment as regards to income from rural occupations. As per the findings of the binary logit model, if income from various rural occupations is considered, it is the income from government salary which has a positive impact on the people's decision of investing in all the formal sectors. The same can be verified from the Table-3 that only income from government salary has a positive impact on all the forms of formal rural savings and its investment whereas income from forestry had negative impact on rural savings and its investment in commercial banks and insurance. At the same time, income from business, agriculture and forestry had an insignificant impact on savings and its investment in post office, insurance and government securities, whereas only income from business and agriculture had an insignificant impact on savings and its investment in commercial banks.

**Table-3: Determinants of Formal Rural Savings and Investment- Income from Rural Occupations**

| Dependent Variable                   | Variables with                |                      | Insignificant variable                         |
|--------------------------------------|-------------------------------|----------------------|------------------------------------------------|
|                                      | Positive Impact               | Negative Impact      |                                                |
| <b>Savings and its Investment in</b> |                               |                      |                                                |
| Commercial Banks                     | Income from government salary | Income from forestry | Income from Business and Agriculture           |
| Post Office                          | Income from government salary |                      | Income from Business, Agriculture and Forestry |
| Insurance                            | Income from government salary | Income from forestry | Income from Business, Agriculture and Forestry |
| Government Securities                | Income from government salary |                      | Income from Business, Agriculture and Forestry |

Source: Reproduced from Appendices

### c. Formal rural savings and its investment- Level of educational qualification

As can be observed from Table 3.46, the respondents' level of educational qualifications starting from 'Matric' to PG and above has a positive impact on their savings and its investment in the all the forms of formal finance with the exceptions of '10+2' having insignificant impact on that of both post office and government securities and 'Matric' on insurance and government securities.

**Table-4: Determinants of Formal Rural Savings and its Investment - Level of Educational Qualifications**

| Dependent Variable                   | Variables with                       |                 | Insignificant   |
|--------------------------------------|--------------------------------------|-----------------|-----------------|
|                                      | Positive Impact                      | Negative Impact |                 |
| <b>Savings and its Investment in</b> |                                      |                 |                 |
| Commercial Banks                     | Matric, 10+2, Graduate, PG and above |                 |                 |
| Post Office                          | Matric, Graduate, PG and above       |                 | 10+2            |
| Insurance                            | 10+2, Graduate, PG and above         |                 | Matric          |
| Government Securities                | Graduate, PG and above               |                 | Matric and 10+2 |

Source: Reproduced from Appendices

#### d. Formal rural savings and its investment - Income from government salary and forestry

Here again, an effort has been made to ascertain the determinants of formal rural savings and its investment as regards to income from government salary and forestry (complementary to Table-5). As can be seen, almost the levels of household income from government salary (except SAL1 and SAL2) has a positive impact on the selected rural households' savings and its investment in the all the forms of formal finance. On the other hand, income from forestry (FOREI3) had a negative impact on selected rural households' savings and its investment in insurance (binary logit model).

**Table-5: Determinants of Formal Rural Savings and its Investment - Income from Government Salary and Forestry**

| Dependent Variable            | Variables with        |                 | Insignificant variable |
|-------------------------------|-----------------------|-----------------|------------------------|
|                               | Positive Impact       | Negative Impact |                        |
| Savings and its Investment in |                       |                 |                        |
| Commercial Banks              | SAL1,SAL3, SAL4, SAL5 |                 | SAL2                   |
| Post Office                   | SAL1,SAL2,SAL4        |                 | SAL3                   |
| Insurance                     | SAL1,SAL2,SAL3,SAL4   | FOREI3          | FOREI1,FOREI2          |
| Government Securities         |                       |                 | SAL1,SAL2,SAL3,SAL4    |
| INF                           |                       |                 |                        |

**Source:** *Reproduced from Appendices*

Note:

SAL1 (Income from Government Salary level 1): Below Rs. 100,000  
 SAL2 (Income from Government Salary level 2): Rs. 100001-200,000  
 SAL3 (Income from Government Salary level 3): Rs. 200001-300000  
 SAL4 (Income from Government Salary level 4): Rs. 300001-400000  
 FOREI1 (Income from Forestry level 1): Below Rs. 20,000  
 FOREI2 (Income from Forestry level 2): Rs. 20001-40000  
 FOREI3 (Income from Forestry level 3): Rs. 40001-60000

#### e. Informal rural savings and its investment in Marups

Quite interestingly, informal rural savings and its investment in *Marups* by the selected rural households are found to be not depended on any variables like rural occupations, income from rural occupations, level of educational qualifications or income from government salary and forestry. Saving and its investment in *Marups* by the rural households were almost found to be related with customary or social phenomenon which is not related with one's income or source of income. Rich or poor, educated or uneducated, young or old, rural households selected for the present study are more or less inclined

towards Marups, irrespective of their income levels. It can truly be said that Marups system of informal finance in Manipur is an age-old method of depending on friends for their financial needs and requirements.

### 1.9 Conclusion and Suggestions

After analysing both formal and marups as an informal means of savings, a simple endeavor has been made to ascertain the view points of the respondents of the study regarding the climatic conditions for savings and its investment in the rural areas of the state. Generally, almost everybody is of the opinion that formal mechanism for savings and investment shall be expanded to all the rural masses for a better climatic conditions for savings and investment and that is the reason for 'financial inclusion' which is the 'buzzword' of the present times. At the same, Manipur as a state is presently undergoing through a stage of political instability in terms of insurgency, law and order problems, etc. Considering these facts in the present study, two pertinent questions were asked to the sample respondents for their responses. The questions are:

- a. Do you think expansion of bank branches induce people to save more?
- b. Do you think insurgency is a problem for investment?

As expected, 75.6 percent of the respondents agreed that expansion of bank branches induced people to save more. At the same time, 81.5 percent of the respondents are of the view that insurgency is not a problem for saving and investment in the state.

From the above responses, it can be concluded that expansion of bank branches into the interior parts of the state, particularly in rural areas, will a long way for having a good climatic condition for savings and investment in the state. It is also true that it is the duty of the state government to provide good law and order situation in the entire state, not only for good climatic condition for savings and investment but also for better living conditions like good infrastructure and creation of public wealth.

Going through the field survey, many a reasons comes up under discussion with the respondents. Some of the important reasons hampering the growth in savings and its investment in the state, particularly in the rural areas were enumerated below:

- a. Absence of bank branches in the locality
- b. Absence of post office in the locality
- c. No Idea of SHGs
- d. Insecurity of informal finance
- e. Others

Responses to this very pertinent query were given by all the selected respondents, district-wise, under the study. '*Absence of post office in the locality*' was cited to be the main problem among the rural households (41.5 percent), followed by '*absence of bank branches in the locality*' (31.9 percent), '*insecurity of informal finance*' (9.6 percent), '*no Idea of SHGs*' and '*rigidity of formal finance*' (6.7 percent each) and '*others*' (3.7 percent).

District-wise, some other important facts are also coming up under this particular analysis. '*Absence of bank branches in the locality*' was very much pertinent and felt much among the rural households, thereby causing much problems for savings and its investment in their rural areas, in Thoubal (9), Imphal West (6), Tamenglong (6) and Chandel (7) districts. This same is also the problem, caused by '*absence of post office in the locality*'

### **Suggestions for good savings and investment climate**

The very purpose of the present study is to analyse the rural saving and its investment as regards to formal finance and marups which is the informal one in order to understand some of the important issues relating to the economic development of rural areas of Manipur. After going through the study, it comes up with the following suggestions, sub-grouped as under:

#### **a. Proper maintenance of law and order**

15.6 percent of selected rural respondents had voiced '*proper maintenance of law and order*' as the suggestions for having a better savings and investment climate. Households mainly from Chandel (4), Imphal East, Imphal West and Thoubal (3 each) districts had recommended that proper maintenance of law and order in the state is of paramount importance for the betterment of savings and investment climate. In fact, it is the responsibility of the government as well as the law enforcing agencies in the state to maintain law of the land and enforce it for having an environment conducive to peaceful co-existence among the different communities and undertaking economic activities required for earning income, saving a part of it and thinking about its investment. At the same time, it is the duty of the people of the state to strictly abide to the rules and regulations thereby helping the state government in maintaining law and order in the state. If any of these two, one the government and the other the people, fails to do its duty, then, maintenance of law and order will be problem, thereby affective the savings and investment climate in the state.

#### **b. Penetration of formal financial institutions in the rural area**

It can just be reminded that '*absence of bank branches in the locality*' was very much felt as one of the important problem among the rural households causing many hardships for savings and its investment in their rural areas. The same was also voiced by them by the '*absence of post office in the locality*'. So, penetration of formal financial

institutions in the rural areas of the state can go a long way in the betterment of savings and investment climatic conditions in the state. Likewise 28.9 percent of the rural households had opined that '*penetration of formal financial institutions in the rural area*' shall be a good suggestion for improving the savings and investment environment of the state in general and rural areas of the state in particular. Households from rural areas, mainly from Tamenglong (7), Bishnupur, Senapati and Chandel (6 each), had voiced this concern.

**c. Provision of income generating schemes for the rural poor**

The state as well as the central government has a lot of flagship programmes specially launched for the welfare of the rural poor. NREGS, SGSY, SGRY, IAY, PMGY etc. are some of the notables among these programmes. Such programmes, not only improves the livelihoods of the rural poor, but also, augment their household incomes thereby increasing savings and its investment. So, 31.9 percent of the rural households are of the opinion that provision of income generating schemes for the rural poor can be boon for the rural savings and investment.

**d. Sound rural infrastructure for the rural masses**

Sound rural infrastructure in terms of good connectivity by road, market places, proper health care system, educational institutions, provision of urban amenities in the rural areas etc. will help, in a long way, in having a good savings and investment climate. The state, being an agrarian-based economy, needs a proper long thought planning for agricultural development. More than 70.0 percent of the state population depends on agriculture related activities for their survival. As such, provision of sound rural infrastructure is a much needed step towards better investment climate in the state. 22.2 percent of the respondents of the present study also agreed this view that sound rural infrastructure can bring a notable change in the lifestyle of the rural poor.

**e. Others**

Other than those discussed above, awareness of rural people for the various policies and programmes initiated by the government is much sought after for their meaningful implementations. 62.9 percent of the rural respondents, for example, were aware of the existing bank rate prevalent at the time of survey. Apart from this, all other responses from the study are included under this heading. It is interesting to note that only 1.2 percent of the sample respondents had 'others' suggestions for a better investment climate in the state.

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17. It is one of the major tribe of Manipur. They are mainly settled in the Ukhrul district of Manipur.



## Appendices

### Dummy Variable Model

Only significant variables are considered corresponding to Logit model

#### **Appendix I**

##### **Regression of Amount of Investment in Commercial Banks (AMTB) on levels of Income from Government Salary**

| Dependent Variable: AMTB  |             |                       |             |          |
|---------------------------|-------------|-----------------------|-------------|----------|
| Method: Least Squares     |             |                       |             |          |
| Sample: 1 135             |             |                       |             |          |
| Included observations: 75 |             |                       |             |          |
| Excluded observations: 60 |             |                       |             |          |
| Variable                  | Coefficient | Std. Error            | t-Statistic | Prob.    |
| C                         | 37727.27    | 18769.98              | 2.009979    | 0.0483   |
| SAL1                      | 866.4773    | 24382.92              | 0.035536    | 0.9718   |
| SAL2                      | 3189.394    | 25985.86              | 0.122736    | 0.9027   |
| SAL3                      | 62272.73    | 31594.59              | 1.970994    | 0.0527   |
| SAL4                      | 76939.39    | 21942.96              | 3.506337    | 0.0008   |
| R-squared                 | 0.271949    | Mean dependent var    |             | 74180.00 |
| Adjusted R-squared        | 0.230346    | S.D. dependent var    |             | 70959.81 |
| S.E. of regression        | 62252.98    | Akaike info criterion |             | 24.98014 |
| Sum squared resid         | 2.71E+11    | Schwarz criterion     |             | 25.13464 |
| Log likelihood            | -931.7553   | F-statistic           |             | 6.536781 |
| Durbin-Watson stat        | 2.190983    | Prob (F-statistic)    |             | 0.000158 |

**Interpretation:** Only SAL4 is significant suggesting that amount invested in commercial banks is determined POSITIVELY by higher income groups.

#### **Appendix II**

##### **Regression of Amount of Investment in Commercial Banks (AMTB) on levels of Income from Forestry**

|                           |  |  |  |  |
|---------------------------|--|--|--|--|
| Dependent Variable: AMTB  |  |  |  |  |
| Method: Least Squares     |  |  |  |  |
| Sample: 1 135             |  |  |  |  |
| Included observations: 75 |  |  |  |  |

Excluded observations: 60

| Variable           | Coefficient | Std. Error            | t-Statistic | Prob.    |
|--------------------|-------------|-----------------------|-------------|----------|
| C                  | 86327.27    | 9275.173              | 9.307349    | 0.0000   |
| FOREI1             | -50827.27   | 22719.44              | -2.237171   | 0.0284   |
| FOREI2             | -11327.27   | 35621.98              | -0.317986   | 0.7514   |
| FOREI3             | -61327.27   | 32130.14              | -1.908715   | 0.0603   |
| R-squared          | 0.098411    | Mean dependent var    |             | 74180.00 |
| Adjusted R-squared | 0.060316    | S.D. dependent var    |             | 70959.81 |
| S.E. of regression | 68786.53    | Akaike info criterion |             | 25.16726 |
| Sum squared resid  | 3.36E+11    | Schwarz criterion     |             | 25.29086 |
| Log likelihood     | -939.7723   | F-statistic           |             | 2.583292 |
| Durbin-Watson stat | 2.028252    | Prob (F-statistic)    |             | 0.060012 |

**Interpretation:** Only FOREI1 affects AMTB negatively.

### Appendix III

#### Regression of Amount of Investment in Post Office (AMPO) on levels of Income from Government Salary

Dependent Variable: AMPO

Method: Least Squares

Sample(adjusted): 4 135

Included observations: 38

Excluded observations: 94 after adjusting endpoints

| Variable           | Coefficient | Std. Error            | t-Statistic | Prob.    |
|--------------------|-------------|-----------------------|-------------|----------|
| C                  | 20500.00    | 60768.77              | 0.337344    | 0.7380   |
| SAL1               | 12728.57    | 68905.31              | 0.184726    | 0.8546   |
| SAL2               | 32666.67    | 70169.73              | 0.465538    | 0.6446   |
| SAL3               | 39500.00    | 105254.6              | 0.375281    | 0.7099   |
| SAL4               | 39119.09    | 63470.91              | 0.616331    | 0.5419   |
| R-squared          | 0.023231    | Mean dependent var    |             | 51690.00 |
| Adjusted R-squared | -0.095165   | S.D. dependent var    |             | 82121.26 |
| S.E. of regression | 85940.02    | Akaike info criterion |             | 25.68277 |
| Sum squared resid  | 2.44E+11    | Schwarz criterion     |             | 25.89824 |
| Log likelihood     | -482.9726   | F-statistic           |             | 0.196214 |
| Durbin-Watson stat | 3.230877    | Prob(F-statistic)     |             | 0.938612 |

**Interpretation:** All salary levels are insignificant suggesting that they do not determine the amount invested in post offices.

**Appendix IV****Regression of Amount of Investment in Insurance (AINSU) on levels of Income from Government Salary**

Dependent Variable: AINSU

Method: Least Squares

Sample: 1 135

Included observations: 66

Excluded observations: 69

| Variable           | Coefficient | Std. Error            | t-Statistic | Prob.    |
|--------------------|-------------|-----------------------|-------------|----------|
| C                  | 67120.00    | 67949.57              | 0.987791    | 0.3272   |
| SAL1               | 14522.86    | 79158.85              | 0.183465    | 0.8550   |
| SAL2               | 880.0000    | 83220.88              | 0.010574    | 0.9916   |
| SAL3               | 116213.3    | 92004.15              | 1.263131    | 0.2113   |
| SAL4               | 116170.3    | 73224.62              | 1.586493    | 0.1178   |
| R-squared          | 0.121125    | Mean dependent var    |             | 135463.6 |
| Adjusted R-squared | 0.063494    | S.D. dependent var    |             | 157006.0 |
| S.E. of regression | 151939.9    | Akaike info criterion |             | 26.77309 |
| Sum squared resid  | 1.41E+12    | Schwarz criterion     |             | 26.93897 |
| Log likelihood     | -878.5120   | F-statistic           |             | 2.101725 |
| Durbin-Watson stat | 1.572358    | Prob (F-statistic)    |             | 0.091485 |

**Interpretation:** None are significant.**Appendix V****Regression of Amount of Investment in Insurance (AINSU) on levels of Forest income**

Method: Least Squares

Sample: 1 135

Included observations: 68

Excluded observations: 67

| Variable | Coefficient | Std. Error | t-Statistic | Prob.  |
|----------|-------------|------------|-------------|--------|
| C        | 149345.1    | 21896.78   | 6.820414    | 0.0000 |
| FOREI1   | -98900.65   | 56537.24   | -1.749301   | 0.0852 |
| FOREI2   | 25654.90    | 81195.43   | 0.315965    | 0.7531 |
| FOREI3   | -64345.10   | 112720.6   | -0.570837   | 0.5702 |

|                    |           |                       |          |
|--------------------|-----------|-----------------------|----------|
| R-squared          | 0.053815  | Mean dependent var    | 135463.6 |
| Adjusted R-squared | 0.008031  | S.D. dependent var    | 157006.0 |
| S.E. of regression | 156374.3  | Akaike info criterion | 26.81658 |
| Sum squared resid  | 1.52E+12  | Schwarz criterion     | 26.94929 |
| Log likelihood     | -880.9473 | F-statistic           | 1.175422 |
| Durbin-Watson stat | 1.657357  | Prob (F-statistic)    | 0.326385 |

**Interpretation:** None are significant.

#### ELASTICITY MODEL

Only significant variables are considered corresponding to Logit model

#### Appendix VI

##### Elasticity of Amount of Investment in Commercial Banks (AMTB) wrt Income from Government Salary (SALG)

| Dependent Variable: LOG(AMTB) |             |                       |             |          |
|-------------------------------|-------------|-----------------------|-------------|----------|
| Method: Least Squares         |             |                       |             |          |
| Sample: 1 135                 |             |                       |             |          |
| Included observations: 65     |             |                       |             |          |
| Excluded observations: 70     |             |                       |             |          |
| Variable                      | Coefficient | Std. Error            | t-Statistic | Prob.    |
| C                             | 4.549744    | 1.376193              | 3.306037    | 0.0016   |
| LOG(SALG)                     | 0.515998    | 0.112154              | 4.600807    | 0.0000   |
| R-squared                     | 0.251492    | Mean dependent var    |             | 10.86053 |
| Adjusted R-squared            | 0.239611    | S.D. dependent var    |             | 1.030766 |
| S.E. of regression            | 0.898831    | Akaike info criterion |             | 2.654842 |
| Sum squared resid             | 50.89750    | Schwarz criterion     |             | 2.721746 |
| Log likelihood                | -84.28237   | F-statistic           |             | 21.16742 |
| Durbin-Watson stat            | 2.222401    | Prob (F-statistic)    |             | 0.000021 |

**Interpretation:** Amount invested in banks is salary income inelastic (0.52) determining a low level of saving. 1% increase in salary income leads to 0.52% increase in investment in banks.

**Appendix VII****Elasticity of Amount of Investment in post Office (AMPO) wrt Income from Government Salary (SALG)**

Dependent Variable: LOG(AMPO)

Method: Least Squares

Sample(adjusted): 4 135

Included observations: 36

Excluded observations: 96 after adjusting endpoints

| Variable           | Coefficient | Std. Error            | t-Statistic | Prob.    |
|--------------------|-------------|-----------------------|-------------|----------|
| C                  | 5.485057    | 2.096756              | 2.615974    | 0.0132   |
| LOG(SALG)          | 0.394930    | 0.168978              | 2.337169    | 0.0255   |
| R-squared          | 0.138419    | Mean dependent var    |             | 10.37185 |
| Adjusted R-squared | 0.113079    | S.D. dependent var    |             | 0.997489 |
| S.E. of regression | 0.939400    | Akaike info criterion |             | 2.766803 |
| Sum squared resid  | 30.00408    | Schwarz criterion     |             | 2.854776 |
| Log likelihood     | -47.80245   | F-statistic           |             | 5.462359 |
| Durbin-Watson stat | 1.247505    | Prob (F-statistic)    |             | 0.025457 |

**Interpretation:** Amount invested in Post Office is salary income inelastic (0.39) determining a low level of saving.

**Appendix VIII****Elasticity of Amount of Investment in Insurance (AINSU) wrt Income from Government Salary (SALG)**

Dependent Variable: LOG(AINSU)

Method: Least Squares

Sample: 1 135

Included observations: 68

Excluded observations: 67

| Variable           | Coefficient | Std. Error            | t-Statistic | Prob.    |
|--------------------|-------------|-----------------------|-------------|----------|
| C                  | 8.167555    | 1.764517              | 4.628776    | 0.0000   |
| LOG(SALG)          | 0.258055    | 0.142682              | 1.808598    | 0.0756   |
| R-squared          | 0.052529    | Mean dependent var    |             | 11.34928 |
| Adjusted R-squared | 0.036470    | S.D. dependent var    |             | 1.086595 |
| S.E. of regression | 1.066597    | Akaike info criterion |             | 2.999060 |

|                    |           |                    |          |
|--------------------|-----------|--------------------|----------|
| Sum squared resid  | 67.12009  | Schwarz criterion  | 3.068269 |
| Log likelihood     | -89.47134 | F-statistic        | 3.271027 |
| Durbin-Watson stat | 1.017115  | Prob (F-statistic) | 0.075610 |

**Interpretation:** Elasticity of amount of investment in insurance with respect to income from government salary is insignificant.

#### Appendix IX

#### Elasticity of Amount of Investment in Government Securities (AMGV) wrt Income from Government Salary (SALG)

Dependent Variable: LOG(AMGV)

Method: Least Squares

Sample(adjusted): 12 121

Included observations: 10

Excluded observations: 100 after adjusting endpoints

| Variable           | Coefficient | Std. Error            | t-Statistic | Prob.    |
|--------------------|-------------|-----------------------|-------------|----------|
| C                  | -5.783151   | 8.002774              | -0.722643   | 0.4905   |
| LOG(SALG)          | 1.254494    | 0.603762              | 2.077794    | 0.0714   |
| R-squared          | 0.350503    | Mean dependent var    |             | 10.84162 |
| Adjusted R-squared | 0.269316    | S.D. dependent var    |             | 0.593596 |
| S.E. of regression | 0.507406    | Akaike info criterion |             | 1.657847 |
| Sum squared resid  | 2.059688    | Schwarz criterion     |             | 1.718364 |
| Log likelihood     | -6.289234   | F-statistic           |             | 4.317229 |
| Durbin-Watson stat | 0.067818    | Prob (F-statistic)    |             | 0.071359 |

**Interpretation:** Elasticity of amount of investment in government securities with respect to income from government salary is insignificant.

**Note:** Income from any occupation has nothing to do with investment in Marups, an informal sector.

# Impact of Organizational Climate in Experiencing Occupational Stress among Executives of Indian Information Technology Organisations

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## Abstract

Present study is an attempt to study the impact of organizational climate in experiencing occupational stress among the executives of Indian Information Technology organizations. Two questionnaires i.e. Organizational Climate questionnaire and Occupational Stress Index were used to collect data from 402 Executives working in eight reputed Information Technology Organisations operating in Gurgaon in the state of Haryana. Statistical methods like correlation and regression method were used to analyse the data. Results show that all correlation coefficients between sixteen organizational climate variables and occupational stress are significant and positive. Further, regression analysis confirms strong influence of seven dimensions of organizational climate such as orientation; quality of work life; problem solving and decision making; communication; customer satisfaction; goal setting, appraisal and counseling; and training in experiencing occupational stress.

**Keywords:** Occupational stress, organizational climate

## Introduction

Modern business organizations are under severe work pressure and competitive work environment outcome of which is higher level of stress among employees and executives. No organization is free from stress. A higher level stress impairs physical and psychological health of executives and employees. It has been observed that prolonged stress leads to undesired behavior. In fact, in the present day business organizations, stress is inevitable. Increasing complexities at work place has been found to be one of the major causes of job stress. It is caused by the divergent and threatening demands of different stressors. In other words, one can say different job situations and characteristics of work environment are responsible for the same. There are job related factors, organization related factors, individual factors, environmental factors that contribute significantly for experiencing stress among the executives and employees. Job stress has been defined as the harmful physical and emotional responses that occur when the requirements of the job do not match the capabilities, resources or needs of the workers. There are different views and opinions about the classification of the occupational stressors. Schuler (1982) has

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identified seven categories of work stressors in organization. They are job qualities, relationships, organizational structure, physical qualities, career development, change and role in the organization. Ivancevich and Matterson (1980), have classified stressors into four categories i.e. physical environment, individual level, group level, and organizational level (a mixture of climate, structure, job design and task characteristics). Landy and Trumbo (1976) found job insecurity, excessive competition, hazardous working conditions and task demands are the dimensions of the stress. According to Sofer (1970), the potential causes for stress at workplace are too much or too little work, time pressures and deadlines and having to make too many decisions. In fact, stress is felt by the individual at varying degrees i.e. from mild to severe level. This is dependent upon individual's physiological and psychological makeup. Mild stress is not harmful for the individual employee. But, severe or extreme stress creates complications in individual's health, mental health, career growth and organizational effectiveness. In acute condition, an employee tries to avoid doing the work, He withdraws psychologically and exhibits disinterest, lack of involvement, less commitment in the job and psychosomatic illness. An employee or executive with prolonged stress may get physical and psychological illness. This illness may affect his work behaviour and social functioning. Reduction or absence of stress leads to satisfied, happy, committed, involved and psychologically strong employees.

Work related stress is very much influenced by the organizational climate. It is something that can be perceived by the employees rather than something that can be recognized cognitively. In other words, it is a set of attributes or characteristics of the organization that is perceived by the employees. Organisational climate is a relatively enduring quality of the internal environment that is experienced by its members, influences their behaviour and can be described in terms of the value of a particular set of characteristics of the organization (Jain Mathew, 2008). Organizational climate is perceived either positive or negative by the employees. If positive then it reduces the stress arise due to

Studying occupational stress and organisational climate in Information Technology Organisations has become essential as employees of such organizations are facing severe competitions and work pressure worldwide. Many professionals are able to sustain pressure and others are unable to do so. A continuous pressure leads to a stage whereby psychological homeostasis of the employee is greatly affected. This may lead dissatisfaction and employee turnover. The critical problem, IT companies are facing is the high rate of employee turnover leading to disruptions in project implementation, loss of skills and loss of employees with hands-on experience. It leaves a detrimental impact in company's business. One of the reasons may be employee stress. Occupational stress is also found among the IT executives due to their typical nature of the work. In a severe form, stress also affects performance of the executives working in IT sectors. Most distinguished characteristic of IT companies is that they are dependent on highly skilled and talented people. Their success depends on the supply of trained and low cost software professionals. Since, IT companies are human resource driven organizations, every step should be taken



to understand how these professionals are to be made satisfied and free from stress arising out of occupational stressors. Because, impact of extreme stress will not only affect the psychological and physical balance of individual professionals but also business volume of the organization in long run. Therefore, present study aims at understanding whether occupational stress is influenced by the organizational climate of the IT companies.

### **Review of Literature**

Organizational climate and occupational stress are important topics of great concern for the researchers. Many academicians, researchers and practicing business managers have undertaken good number of studies in these relevant areas. The volume of research in these areas speaks itself the importance attached to these two themes. Although many researches have been conducted in different organizational settings, yet researches relating to the IT sector are limited. The studies which have direct and indirect relation to these areas are presented in a chronological manner.

Sharma and Devi (2011). In a study, they collected data from 530 frontline employees from various public and private sector banks and tried to assess the causes of role stress. The identified eight role related factors which represent twenty-two variables. They concluded that role indistinctness, role excess, role invasiveness, role divergence, role augmentation, self diminution, role fortification and resource shortage are the causes of role stress.

Ranta, Singh and Sud(2008). They studied the management of stress and burn out in police personnel. Outcome of the study is physiological, psychological and behavioural effects of stress and burn out in police can be severe which is a matter of concern. The manifestation of stress and burnout in the form of suicide and killings highlight the urgent need that these must be tackled.

Jain, Mishra and Gupta(2007). In a study they found that high age group managers as well as high age group engineers were equally satisfied with their jobs. Further, they found similar results when low age group managers and low age group engineers were compared on their job satisfaction level.

Sharma, Khera and Khandekar(2006). According to them, visual stress and musculoskeletal symptoms, initially being mild and temporary becomes more intense and permanent in nature with the increasing of years. They suggested that computer related morbidity has become an important occupational health problem. Further, they suggested immediate need for the concerned authorities to collaborate and enforce suitable preventive measures.

Rajeswari and Anantharaman(2005). In a study they tried to find out causes for occupational stress and work exhaustion among IT professionals. They attributed long work hours with different time zones and total team work, task to be completed on deadline with perfection as per the client needs are some of the important causes of the stress.

Chandraiah et.al.(2003). Observed that job becomes less satisfying under excessive stress and when expected intrinsic and extrinsic needs are not fulfilled. Findings show that age plays a vital role to test the correlations between occupational stress and job satisfaction level. Further, their study reveals that senior level officers have a decreased stress level and increased satisfaction as compared to middle level managers.

Rajeswari and Anantharaman(2003). They conducted a study to find out sources of negative pressure among software professionals, from the perspective of the software development process. The results revealed that stress resulted from fear of obsolescence and individual team interventions .

### **Objective of the Study**

Main objective of the present study is to examine the impact of organizational climate in experiencing occupational stress among Executives of Indian Information Technology Organisations.

### **Methodology**

#### **Hypothesis**

Following hypotheses were formulated and tested after collection of the data from the respondents:

- H1. There will be a significant correlation between the organisational climate variables and occupational stress in IT organisations.
- H2. Organisational climate variables are the significant predictors of occupational stress experienced by the IT executives.

#### **Sample**

Most of the IT industries in India are situated in and around metro or big cities. In the present study, IT industries in Gurgaon, Haryana are considered. This place is situated near by Delhi and major IT industries are established in Gurgaon. Out of all IT industries in Gurgaon, eight were selected on convenient sampling basis. Other condition to be included in the sample was willingness of the executives working in IT industries. During the sample selection , care was taken to select respondents from different departments and from different age groups, gender groups and different types of jobs. A total of 450 questionnaires were distributed for the data collection and 412 questionnaires were returned. Finally, 402 questionnaires were selected for the data analyses as rest of the questionnaires were incompletely filled.

#### **Tools Used**

Questionnaire method was used to collect data from the respondents. Two different questionnaires i.e. organizational climate questionnaire and occupational stress index

were used to collect required data.

### **Organisational Climate Scale**

This scale has been used for Identifying organizational climate prepared by TV Rao and E Abraham, Academy of Human Resources Development, Ahmedabad for Indian oil corporation. The questionnaire measures 16 dimensions of organizational climate with the help of 99 questions. The dimensions are quality of work life, leadership, management of change, empowerment, problem solving and decision making, conflict management, creativity and innovation, communication, image, customer service, role efficacy, goal setting, appraisal and counseling, career planning, training and rewards. The item-wise mean score were calculated and then converted into percentile score. The percentile scores and interpretations are : More than 65 is interpreted as very good; 60-64 is interpreted as good; 55-59 is interpreted as fair; 50-54 is interpreted as average and below 50 is poor. Score below 50 on any items reflects that improvement is needed in that direction to achieve overall growth in the organization.

### **Occupational Stress Index( OSI)**

The second questionnaire used in this study is Occupational Stress Index (OSI) prepared by A. K. Srivastava and A. P. Singh. This standardized questionnaire has the reliability coefficient ascertained by Split half (odd even) method and Cronbach's alpha-coefficient for the scale as a whole were found to be 0.937 and 0.90 respectively. The questionnaire has 46 items distributed under 12 variables. The variables are role overload, role ambiguity, role conflict, group/political pressures, persons responsibility, under participation, powerlessness, poor peer relations, intrinsic improvement, status, strenuous working condition and unprofitability. Norms have been prepared for the OSI as a whole as well as twelve subscales separately of different cadre involved in production and nonproduction activities. The scores were divided into three categories i. e. high, moderate and low following the principle of normal distribution. The scores falling above  $+1 \sigma$ , between  $\pm 1\sigma$  and below  $-1\sigma$  were categorized respectively as to indicate high, moderate and low levels of occupational stress.

### **Results and Discussion**

For the analysis of the collected data, statistical techniques like correlation and regression analysis were carried out. Correlation has been carried out to see the close relationship between the variables of organizational climate and occupational stress. Regression analysis has been undertaken to examine the predictor effect of the organizational climate variables in experiencing occupational stress by the IT executives. The dependent variable is the occupational stress and independent variables are the different dimensions of the organizational climate. Table -1 shows correlation between occupational stress and organizational climate variables and Table-2 shows result of the stepwise multiple regression analysis.

Table -1: Correlation between occupational stress and organizational climate variables

| variables        | 1      | 2       | 3      | 4      | 5       | 6       | 7       | 8       | 9       | 10     | 11      | 12      | 13     | 14      | 15     | 16    | 17    |
|------------------|--------|---------|--------|--------|---------|---------|---------|---------|---------|--------|---------|---------|--------|---------|--------|-------|-------|
| Occupa Stress    | 1.000  |         |        |        |         |         |         |         |         |        |         |         |        |         |        |       |       |
| Orientation      | .309** | 1.000   |        |        |         |         |         |         |         |        |         |         |        |         |        |       |       |
| QWL              | .500** | .790**  | 1.000  |        |         |         |         |         |         |        |         |         |        |         |        |       |       |
| Leadership       | .378** | .707**  | .807** | 1.000  |         |         |         |         |         |        |         |         |        |         |        |       |       |
| Mgt of Change    | .186** | .476**  | .407** | .706** | 1.000   |         |         |         |         |        |         |         |        |         |        |       |       |
| EmpowermentL     | .221** | .568**  | .460** | .572** | .672**  | 1.000   |         |         |         |        |         |         |        |         |        |       |       |
| Problem solving  | .160** | .590**  | .386** | .601** | .727**  | .778**  | 1.000   |         |         |        |         |         |        |         |        |       |       |
| Conflict Mgt     | .107** | .629**  | .512** | .623** | .665**  | .517**  | .548**  | 1.000   |         |        |         |         |        |         |        |       |       |
| Creativity       | .391** | .793**  | .757** | .608** | .368**  | .617**  | .499**  | .473**  | 1.000   |        |         |         |        |         |        |       |       |
| CommunicationL   | .390** | .503**  | .544** | .624** | .447**  | .511**  | .495**  | .351**  | .656**  | 1.000  |         |         |        |         |        |       |       |
| Image            | .467** | .619**  | .630** | .602** | .529**  | .614**  | .475**  | .465**  | .696**  | .527** | 1.000   |         |        |         |        |       |       |
| Customer service | .450** | .615**  | .515** | .638** | .708**  | .689**  | .777**  | .466**  | .572**  | .560** | .693**  | 1.000   |        |         |        |       |       |
| Goal setting     | .417** | .582**  | .580** | .734** | .666**  | .602**  | .653**  | .512**  | .446**  | .409** | .601**  | .711**  | 1.000  |         |        |       |       |
| Career Planning  | .244** | -.271** | -.017  | -.123* | -.467** | -.473** | -.460** | -.609** | -.212** | -.021  | -.183** | -.221** | -.043  | 1.000   |        |       |       |
| Training         | .217** | .734**  | .633** | .667** | .481**  | .508**  | .430**  | .601**  | .722**  | .549** | .566**  | .468**  | .507** | -.175** | 1.000  |       |       |
| Reward           | .483** | .627**  | .610** | .537** | .345**  | .467**  | .478**  | .180**  | .651**  | .509** | .650**  | .639**  | .603** | .229**  | .641** | 1.000 |       |
| Role efficacy    | .537** | .678**  | .696** | .667** | .456**  | .580**  | .544**  | .342**  | .780**  | .717** | .735**  | .719**  | .639** | .088    | .682** | .836* | 1.000 |

From table-1, it can be observed that organizational climate variables like quality of work life, leadership, management of change, empowerment, problem solving and decision making, conflict management, creativity and innovation, communication, image, customer service, role efficacy, goal setting, appraisal and counseling, career planning, training and rewards have positive and significant correlations with the occupational stress level. A statistically significant correlation was found between the organizational climate variables and occupational stress i.e. between orientation and occupational stress (0.30), between quality of work life and occupational stress (0.50), between leadership and occupational stress (0.37), between management of change and occupational stress (0.18), between empowerment and occupational stress (0.22), between problem solving and decision making (0.16), between conflict management and occupational stress (0.10), between creativity and occupational stress (0.39), between communication and occupational stress (0.39), between image and occupational stress (0.46), between customer service and occupational stress (0.45), between goal setting, appraisal & counseling and occupational stress (0.41), between career planning and occupational stress (0.21), between training and occupational stress (0.48), between role efficacy and occupational stress (0.53). This shows that all these variables have close relationship with occupational stress level of the IT executives. Thus, first hypothesis which says 'there will be a significant correlation between the organisational climate variables and occupational stress in IT organisations' has been accepted.

Further, regression analysis was carried out to see how much percentage of variance is contributed by the organizational climate variables in experiencing occupational stress experienced by the IT Executives. The influence of organizational climate variables and occupational stress was examined through regression analysis. Initially retained 16 dimensions of 'organizational climate scale' were subjected to multiple regressions with 'occupational stress Scale'.

**Table -2: Results of Regression Analysis**

| Predicted variables    | Predictor      |         | Standardized Coefficients | t                | Co-linearity Statistics |
|------------------------|----------------|---------|---------------------------|------------------|-------------------------|
|                        | R <sup>2</sup> | F       | Beta                      |                  |                         |
| Occupational stress    | .472           | 23.43** |                           | <b>Tolerance</b> | <b>VIF</b>              |
| 1 Orientation          |                |         | .202 2.301*               | .171             | 5.860                   |
| 2 Quality of work life |                |         | .404 4.051**              | .132             | 7.571                   |
| 3 Leadership           |                |         | .130 1.221                | .115             | 8.666                   |
| 4 Management of change |                |         | .055 .653                 | .184             | 5.442                   |
| 5 Empowerme-nt         |                |         | .020 .267                 | .244             | 4.094                   |

|    |                                      |  |      |         |      |       |
|----|--------------------------------------|--|------|---------|------|-------|
| 6  | Problem solving and decision making  |  | .350 | 3.670** | .145 | 6.917 |
| 7  | Conflict management                  |  | .112 | 1.422   | .211 | 4.739 |
| 8  | Creativity and innovation            |  | .053 | .551    | .141 | 7.094 |
| 9  | Communication                        |  | .138 | 2.160*  | .324 | 3.088 |
| 10 | Image                                |  | .031 | .435    | .262 | 3.813 |
| 11 | Customer satisfaction                |  | .384 | 4.636** | .192 | 5.220 |
| 12 | Goal setting, appraisal & counseling |  | .193 | 2.515*  | .223 | 4.491 |
| 13 | Career planning                      |  | .062 | .687    | .160 | 6.248 |
| 14 | Training                             |  | .302 | 3.715** | .199 | 5.028 |
| 15 | Reward                               |  | .150 | 1.538   | .139 | 7.213 |
| 16 | Role efficacy                        |  | .181 | 1.777   | .127 | 7.873 |

On the basis of regression analysis, it was found that only six out of sixteen dimensions of the organizational climate contributed significantly to the total variance of occupational stress. The total contribution of these variables amount to 47% of the total variance. Thus, results confirm strong influence of seven dimensions; orientation; quality of work life; problem solving and decision making; communication; customer satisfaction; goal setting, appraisal and counseling; and training in experiencing occupational stress. The t- value of these organizational climate variables are 2.301\*, 4.051\*\*, 3.670\*\*, 2.160\*, 4.636\*\*, 2.515\*, and 3.715\*\* respectively. No doubt, lack of orientation to the IT Executives will create problem in implementing company's policies and assigned responsibility to the executives. Poor quality of work life affects efficiency and satisfaction level of the IT Executives. This may lead to increase stress level of the IT Executives. It has been found in many researches that if talented and professionally qualified executives are not involved in the problem solving and decision making process, then they experience stress. This has also been found true for the IT executives. A proper and two-way communication is essential in every organization for creating a free environment. Lack of proper communication may lead to the feeling of stress among the IT Executives. Because, the work of an IT Executive needs clear cut information and directions from the seniors. Any deviation may create problem for the executives to complete their time-bound work. Customer satisfaction is the major issue for all organizations. It is essential for them to sustain in the market. Dissatisfaction of a customer affects the business relationship of the individual employee who is handling the project. This may even question mark his capability. Similarly goal setting is very much essential for the executives otherwise they may face problems in

completing the task. Failure in handling this may lead to experience stress. Proper training and counseling are also equally important for the existing as well as new employees. They need continuous and frequent trainings to upgrade their knowledge. In case such opportunities are not provided to them, then, they may feel frustrated and stressed. This partially proves second hypothesis which says 'organisational climate variables are the significant predictors of occupational stress experienced by the IT executives'.

### **Industry Implications**

Findings of the present study have lots of significance for the Information Technology Companies. These companies are human resource driven organizations. They are dependent on the talent and capabilities of the human resources. In order to unfold their potentialities, IT companies must try to analyse organizational climate at a deeper level. They must try to remove blockades, if at all, present in their organization and create a healthy and conducive climate.

Following suggestions are offered to the IT companies to reduce stress among its executives:

- IT companies must organize orientation programmes for its newly inducted executives and for them who get promotion. This will help them to understand their responsibilities expected from the new positions. Failing to understand their duties may lead to problem later on.
- IT companies must try to improve quality of work life of the Executives. They need flexible time and some leisure hours to make them relax during the working hour.
- Executives of IT companies must be involved in decision making and problem solving processes. This will enhance belongingness in the organizations.
- Communication must be two- way in IT companies. A two-way communication process will help the executives to understand the directives given by the seniors.
- IT companies must organize interactive sessions with the customers. These sessions will help executives in understanding needs of the customers and yield maximum customer satisfaction.
- IT companies must help and provide counseling to their executives to set their goals.
- They must appraise them their performance and provide continuous feedback to them.
- All IT Executives are knowledge workers. They need to enhance horizon of their knowledge. Lacking of such opportunities may lead to frustration and thereby,

enhance stress level among the executives. In order to get rid of it, Information Technology companies must organize or send their executives for training programmes very frequently.

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## CUSTOMERS' PREFERENCE FOR SELECTING PRIVATE HOSPITAL: A STUDY IN MANIPUR

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### Abstract

With the rapid expansion of population and shortages of healthcare facilities in governments' hospitals, private hospitals in the society have been playing a vital role. The demand of health services in private hospitals is increasing because of the certain amenities and facilities that are provided by these institutions. Patients can choose a hospital according to what matters most to them, whether it's location, cost consideration, infrastructure availability, suggestion from friends, referred by doctors, etc. The present paper intends to find out customers priority for the selection of private hospital for their treatment. The paper aims to test the proportion of patients willing to seek a particular hospital (medical provider) is same across all the attributes for treatment. It also explores the factors playing significant role in customer preference for a private hospital. Data have been collected through schedule in three biggest multi-specialty private hospitals of Manipur (India). Cochran's Q test is used to test whether the proportion of patients willing to seek a particular hospital (medical provider) is same across all the attributes for treatment. The findings of the present study would be an important aid for hospital administrators.

### Introduction

Astoundingly growing population and shortage of healthcare service providers are the important bottlenecks for the growth of the human society. As such with the rapid expansion of population and shortages of healthcare facilities in governments' hospitals, private hospitals in the society have been playing a vital role. Even though there are many government hospitals which are providing health services to the populace of the region, the services rendered is inadequate in terms of quantity and quality. The demand of health services in private hospitals is increasing day-by-day because of the certain factors like better amenities and facilities provided to the patients. Visiting a private hospital will speak itself the difference one can find from the government help. No doubt, it is markedly different from a public one.

Preference of the patients for the selection of a hospital for treatment varies from patient to patient. It also varies from time to time. The variation may be due to several reasons. Preference may be because of locations of the hospitals, cost involvement in the treatment, infrastructure available with the hospitals, peer suggestion, doctors' reference etc.

### Review of literature

Various studies have been conducted to assess the determinant of patient choice of

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medical provider. Some of the selected studies are as follow:

In a study by Yip et.al, (1998) entitled “Determinants of patient choice of medical provider: case study of rural China” examines the factors that influence patient choice of medical provider in the three tier health care system in rural China: Village health posts, township health centres and county hospitals. The study using the multinomial logit model from a sample of household survey in Syunyi county of Beijing in 1993 showed that relative to self-pay patients, government and labour health Insurance beneficiaries are more likely to use county hospitals, while patient covered by Cooperative Medical System are more likely to use village level facilities. The study also reveals that disease patterns have significant impact on patient choice of providers.

Escarce and Kanika (2009) in a study entitled ‘Do Patients Bypass Rural Hospitals? Determinants of Inpatient Hospital Choice in Rural California’ examines the hospital characteristics that are associated with patients choosing rural hospitals. Using data from California hospitals, the paper shows that patients were more likely to choose nearby hospitals, larger hospitals, and hospitals that offered more services and technologies.

Yadav (2007) in a cross-sectional study conducted at the Government Medical College Hospital, Miraj shows that owing to inflation and rising costs of commodities, some people from the upper middle class can no more afford the costs incurred in the private medical sector and have to therefore seek medical services of a government hospital. The study shows that patients gave multiple reasons for choosing a government hospital. Sixty percent of the consumers reported that they had learnt from others about the good reputation of services provided by the hospital. Economic reasons, i.e., unable to afford treatment from private sector, were cited by 44% consumers. Twenty-four percent consumers claimed that they had tried private medical establishments but were dissatisfied with them for various reasons and therefore had turned to the government hospital. In case of 12% consumers, they were referred by primary health centers/ rural hospitals/ private general practitioners for further management.

Dranove, et al (1993) analysed evidence of market segmentation on the basis of patients’ insurance status, demographic characteristics, and medical condition in selected local markets in California in the years 1983 and 1989. It found that distance matters, and that patients prefer nearby hospitals, more so for some medical conditions than others.

Cohen and Lee (1985) conclude that there are significant differences in the hospital utilization models for various population groups and medical service categories. In particular, the results indicate that men prefer teaching hospitals, whereas women do not. Travel time is the most significant variable in all cases, but it is more important for adults and elders than it is for children. There are also different patterns of utilization for different socioeconomic groups of the population. These differences involve the relative importance of physicians versus hospitals’ service scope as a determinant of hospital choice. In general, physicians are less important for poorer patients, whereas the scope of hospital service is

more important for poorer patients.

Grote, et al, (2007) in an online survey of more than 2,000 US patients with commercial insurance or Medicare about their attitudes toward the patient's experience revealed that most of them are willing to switch hospitals for better service and amenities and that many have already asked their physicians to refer them to specific facilities.

Blizzard (2005) found that community members do not necessarily have a preferred hospital for all types of conditions. Many people differentiate healthcare facilities based upon their expertise in treating a particular type of illness. Consumers tend to be open to using multiple hospitals based upon their perceptions of the clinical expertise of each. The other big concern for many community members is the relative incidence of medical errors committed in each of the facilities under consideration.

### **Objective of the study**

The present paper intends to find out customers priority to a selection of private hospitals for treatment. The paper aims to test the proportion of patients willing to seek a particular hospital (medical provider) is same across all the attributes for treatment. It also explores the factors playing significant role in customer's preference for a private hospital.

The paper reports the survey findings and discusses its managerial implications.

### **Hypothesis**

The following hypothesis has been framed to meet the objective of the study:

The proportion of patients willing to seek a particular hospital (medical provider) is same across all the attributes for treatment.

### **Methodology**

Data have been collected through schedule in three biggest multi-specialty private hospitals of Manipur (India) namely Shija Hospitals and Research Institute (SHRI), Christian Medical Centre (CMC) Hospital, and Imphal Hospital and Research Centre (Imphal Hospital). Cochran's Q test is used to test whether the proportion of patients willing to seek a particular hospital (medical provider) is same across all the attributes for treatment.

### **Sample**

The sample consisted of 143 respondents, which include 63 from SHRI and 40 each from CMC Hospital and Imphal Hospital. The general demographic profiles of the respondents are given in the table 1 and table 2. The profiles of the respondents were taken on characteristics like age, gender, occupation, education and monthly income of the family. The occupation were categorized into 6 groups viz. government service, housewife, private employee, retired, self-employed and student. Education was grouped into 5 categories viz. below high school, completed high school, completed higher secondary, graduate, and

post graduate and above. Family monthly income was divided into four category viz. less than Rs. 5000, Rs. 5001 to 10000, Rs. 10001 to 20000 and above Rs.20000.

**Table 1: Showing Statistics of Respondents' age**

| Sl. No. | Mean  | S.D.  | Median | Mode | Min | Max |
|---------|-------|-------|--------|------|-----|-----|
| 1       | 41.16 | 17.14 | 42     | 35   | 6   | 75  |

**Table 2: Showing Distribution of Respondents' Gender, Profession , Education and Salary**

| Sl. No.                    | Category       | Respondents        | Total     | Percentage        |
|----------------------------|----------------|--------------------|-----------|-------------------|
| 1                          | Gender         | Male               | 71        | 49.65             |
|                            |                | Female             | 72        | 50.35             |
| 2                          | Occupation     | Government Service | 34        | 23.78             |
|                            |                | House wife         | 19        | 13.29             |
|                            |                | Private employee   | 29        | 20.28             |
|                            |                | Retired            | 19        | 13.29             |
|                            |                | Self employed      | 21        | 14.69             |
|                            |                | Student            | 21        | 14.69             |
|                            |                | 3                  | Education | Below High School |
| Completed High School      | 18             | 12.59              |           |                   |
| Completed Higher Secondary | 60             | 41.96              |           |                   |
| Graduate                   | 43             | 30.07              |           |                   |
| Post Graduate              | 16             | 11.19              |           |                   |
| 4                          | Monthly Income | Less than 5000     | 1         | 0.70              |
|                            |                | 5000 to 10000      | 23        | 16.08             |
|                            |                | 10001 to 20000     | 70        | 48.95             |
|                            |                | Above 20000        | 49        | 34.27             |

Out of 143 respondents, 71 were males and 72 were females constituting 49.65 percent and 50.35 percent for the males and females respectively. The average age of the respondents were 41 years with 6 and 75 years old being the minimum and maximum age of the respondents respectively. In terms of occupation, government servants (23.78 percent) were largest in number followed by private employees (20.28 percent), self-employed and

students (14.69 percent each) and housewives and retired (19 percent each). In terms of education, 41.96 percent had higher education as highest qualification followed by graduate (30.07 percent), high school (12.59 percent), post-graduate (11.19 percent) and below high school (4.20 percent). As many as 70 numbers constituting 40.95 percent belonged to the family monthly income group of Rupees 10001 to 20000. It is followed by 49 numbers (34.27 percent) of family monthly income of above Rupees 20000, 23 (16.08 percent) of family income of Rupees 5000 to 10000 and remaining only 1 (0.07 percent) had a family income of less than Rupees 5000.

### Factors for Choosing the Hospital

The respondents have been enquired on the reasons that led them to choose the particular hospital. The attributes considered in the present study includes Hospital near to home, Transport convenience, Cost consideration, Infrastructure consideration, Availability of specialist physicians & surgeons, Patient urgency, Suggested by friends & relatives, Referred by consulted doctors, Security consideration, Media influence and Reimbursement facility. From the data, a table is formed by depicting the respondents in rows and the attributes in columns. A value of '1' is assigned for the presence of an attribute i.e. for 'yes' response and value of '0' for the absence of an attribute i.e. for 'no' response for each observations (respondents). The respondent has the freedom to 'yes' or 'no' to all or none of the attributes (columns). The respondents that have given the same rating for all the attributes need to be disregarded.

The Cochran formula is given as under:

$$Q = \frac{(k - 1) \left[ k \sum_{j=1}^k G_j^2 - \left( \sum_{j=1}^k G_j \right)^2 \right]}{k \sum_{i=1}^N L_i - \sum_{i=1}^N L_i^2}$$

Where, k = number of attributes (columns)

N = Total respondents (number of rows)

G = Number of successes per attributes (number of '1s')

L = Number of successes per respondents or observations

**Table-4 : Showing Row Totals and Squares of the Row Totals**

| Li | Li <sup>2</sup> | Li | Li <sup>2</sup> | Li | Li <sup>2</sup> | Li | Li <sup>2</sup> | Li         | Li <sup>2</sup> |
|----|-----------------|----|-----------------|----|-----------------|----|-----------------|------------|-----------------|
| 3  | 9               | 5  | 25              | 6  | 36              | 5  | 25              | 6          | 36              |
| 5  | 25              | 5  | 25              | 4  | 16              | 6  | 36              | 3          | 9               |
| 5  | 25              | 4  | 16              | 4  | 16              | 6  | 36              | 4          | 16              |
| 6  | 36              | 2  | 4               | 4  | 16              | 3  | 9               | 3          | 9               |
| 5  | 25              | 5  | 25              | 2  | 4               | 4  | 16              | 5          | 25              |
| 3  | 9               | 4  | 16              | 5  | 25              | 2  | 4               | 7          | 49              |
| 7  | 49              | 4  | 16              | 6  | 36              | 4  | 16              | 7          | 49              |
| 5  | 25              | 5  | 25              | 6  | 36              | 6  | 36              | 4          | 16              |
| 3  | 9               | 4  | 16              | 3  | 9               | 5  | 25              | 6          | 36              |
| 6  | 36              | 3  | 9               | 4  | 16              | 3  | 9               | 5          | 25              |
| 4  | 16              | 4  | 16              | 2  | 4               | 5  | 25              | 4          | 16              |
| 4  | 16              | 6  | 36              | 4  | 16              | 4  | 16              | 7          | 49              |
| 4  | 16              | 6  | 36              | 6  | 36              | 5  | 25              | 6          | 36              |
| 5  | 25              | 3  | 9               | 7  | 49              | 2  | 4               | 5          | 25              |
| 5  | 25              | 7  | 49              | 3  | 9               | 5  | 25              | 6          | 36              |
| 5  | 25              | 4  | 16              | 3  | 9               | 4  | 16              | 5          | 25              |
| 7  | 49              | 4  | 16              | 3  | 9               | 6  | 36              | 4          | 16              |
| 7  | 49              | 5  | 25              | 5  | 25              | 5  | 25              | 6          | 36              |
| 4  | 16              | 4  | 16              | 4  | 16              | 2  | 4               | 4          | 16              |
| 5  | 25              | 5  | 25              | 5  | 25              | 6  | 36              | 5          | 25              |
| 4  | 16              | 5  | 25              | 6  | 36              | 6  | 36              | 7          | 49              |
| 4  | 16              | 3  | 9               | 5  | 25              | 2  | 4               | 5          | 25              |
| 7  | 49              | 5  | 25              | 4  | 16              | 4  | 16              | 4          | 16              |
| 6  | 36              | 5  | 25              | 5  | 25              | 4  | 16              | <b>660</b> | <b>3278</b>     |
| 5  | 25              | 4  | 16              | 4  | 16              | 3  | 9               |            |                 |
| 7  | 49              | 5  | 25              | 4  | 16              | 4  | 16              |            |                 |
| 5  | 25              | 5  | 25              | 6  | 36              | 5  | 25              |            |                 |
| 3  | 9               | 4  | 16              | 5  | 25              | 3  | 9               |            |                 |
| 6  | 36              | 4  | 16              | 5  | 25              | 6  | 36              |            |                 |
| 4  | 16              | 2  | 4               | 4  | 16              | 3  | 9               |            |                 |

**Table-5 : Column Totals and Square of Column Totals**

|                                  |      |      |     |       |       |      |      |      |      |     |     |              |
|----------------------------------|------|------|-----|-------|-------|------|------|------|------|-----|-----|--------------|
| <b>G<sub>j</sub></b>             | 44   | 50   | 28  | 111   | 124   | 64   | 63   | 62   | 82   | 22  | 10  | <b>660</b>   |
| <b>G<sub>j</sub><sup>2</sup></b> | 1936 | 2500 | 784 | 12321 | 15376 | 4096 | 3969 | 3844 | 6724 | 484 | 100 | <b>52134</b> |

To arrive at the Cochran's Q test, the data have listed and tables have been framed for all the observation. The list of Row total (Li) and Squares of the Row Totals (Li<sup>2</sup>) are given in the table-4 while the Column Totals (Gj) and Square of Column Totals (Gj<sup>2</sup>) are given in the table-5. In table-4 the summation of Row total ("Li) and Squares of the Row Totals ("Li<sup>2</sup>) are given in the last two cells i.e 660 and 3278 respectively. Similarly, in table-5, the summation of Column Totals ("Gj) and Square of Column Totals ("Gj<sup>2</sup>) are given in the last two cells i.e. 660 and 52134 respectively.

Here, we get

The summation of Squares of the column totals ("G<sup>2</sup>)

$$= 1936+2500+784+12321+15376+4096+3969+3844+6724+484+100$$

$$= 52134$$

Similarly, the summation of Squares of the Row Totals ("L<sup>2</sup>) = 3278

Applying Cochran formula to compute Q.

$$Q = \frac{(k-1) \left[ k \sum_{j=1}^k G_j^2 - \left( \sum_{j=1}^k G_j \right)^2 \right]}{k \sum_{i=1}^N L_i - \sum_{i=1}^N L_i^2}$$

$$Q = \frac{(11-1)[11 \times 52134 - (660)^2]}{11 \times 660 - 3275}$$

We have, Q = 345.982

The critical value from Chi-square ( $\chi^2$ ) table for (k-1) i.e. 10 degrees of freedom at 0.05 level of significance is 18.307.

Since the calculated Q is higher than the critical  $\chi^2$  value of 18.307, hence we can reject the null hypothesis of equal proportion of patients willing to seek a particular hospital (medical provider) is significantly same across all the attributes.

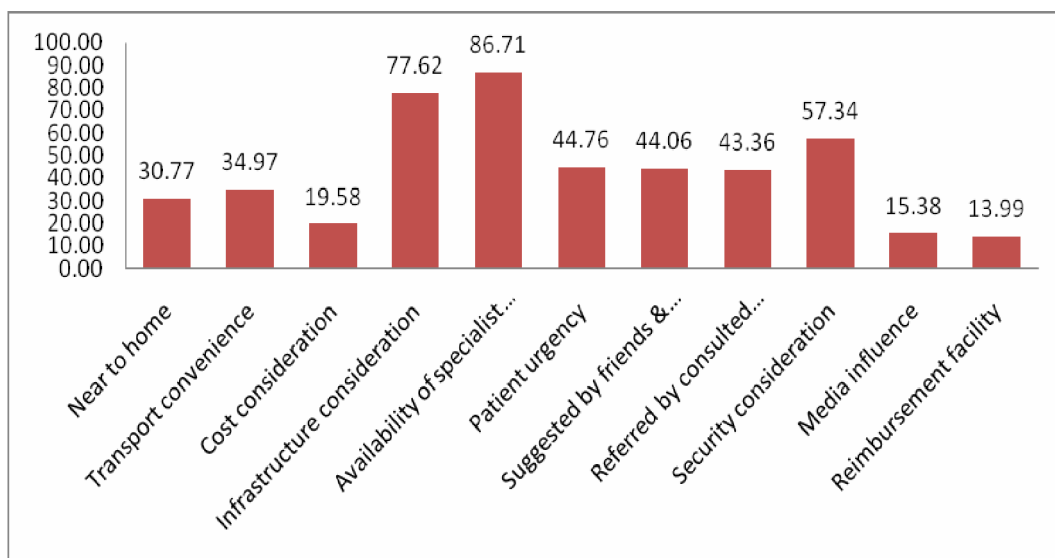
Therefore, the proportion of patients willing to seek a particular hospital (medical provider) is significantly different across the attributes for treatment. Further, we can conclude that patients have different reasons and preferences in choosing a hospital.

To better understand the significant difference across the attributes for treatment,

frequency table and graphs have been presented in table-6 and graph-1. Eleven factors with their respective frequencies are listed in the table 6 of which the customers of the hospital has given their choice of response. Similarly histograms have been shown in the graph-1.

**Table-6: Showing Customers' Response on Reason For Choosing the Hospitals**

| Sl. No. | Attributes                                       | Frequency | Percentage |
|---------|--------------------------------------------------|-----------|------------|
| 1       | Near to home                                     | 44        | 30.77      |
| 2       | Transport convenience                            | 50        | 34.97      |
| 3       | Cost consideration                               | 28        | 19.58      |
| 4       | Infrastructure consideration                     | 111       | 77.62      |
| 5       | Availability of specialist physicians & surgeons | 124       | 86.71      |
| 6       | Patient urgency                                  | 64        | 44.76      |
| 7       | Suggested by friends & relatives                 | 63        | 44.06      |
| 8       | Referred by consulted doctors                    | 62        | 43.36      |
| 9       | Security consideration                           | 82        | 57.34      |
| 10      | Media influence                                  | 22        | 15.38      |
| 11      | Reimbursement facility                           | 20        | 13.99      |



**Graph-1: Histogram showing percentage of attributes for patient choice**



Respondents give multiple reasons for choosing a particular hospital. As shown in the Table 6 and Graph 1, availability of specialist physicians and surgeons rank first with 86.71 percent of the respondents giving it as an attribute of the hospital in choosing by them. Infrastructures consideration is one of the reasons for choosing the hospital for 77.62 percent of the respondents. Security consideration is a factor for 57.34 percent of the respondents. These are followed by patient urgency (44.76 percent), suggested by friends and relatives (44.06 percent), referred by consulted doctors (43.36 percent), transport convenience (34.97 percent), near to home (30.77 percent), cost consideration (19.58 percent), media influence (15.38 percent) and re-imbursement facility (13.99 percent).

As shown in the graph 1, availability of specialists doctors and surgeons and infrastructure consideration of the hospitals are the dominant important reason for the choice of the hospitals by the patients.

### **Conclusions:**

The study has analysed patient health-seeking behaviour and choice of a hospital. It represents an effort to identify the individual factors in determining patient choice of private hospitals in the state of Manipur. The Cochran's Q test revealed that the proportion of patients willing to seek a particular hospital (medical provider) is significantly different across the attributes for treatment. Availability of specialists doctors and surgeons and infrastructure consideration of the hospitals are the dominant reason for the choice of the hospitals by the patients. Patients have different reasons and preferences in choosing a hospital. The findings of the present study are important for hospital administrators.

One of the main objectives of hospital is to provide adequate care and treatment of its patients. Its principal product is medical treatment, surgical and nursing services to the patient and its central concern is life and health of the patient. As a service organization, the hospitals need to recognize the importance of consumer preferences. Hospital should be able to meet the expectations of the patients and patient relations attending him or her. In the present scenario, health care sector is booming. Many people are investing money on this sector. Big corporate houses have entered into health services sector. They are coming with a corporate and professional culture. This has become a great threat to the domestic health care providers. In order to compete with them these health care providers should try to understand the preferences of the patients. If the services provided by them matches to the expectations of the patients, then it will yield maximum satisfaction. Dissatisfaction may lead the patients to keep him away from the treatment of the same hospitals.

The study is exploratory in nature and is an attempt to find out customers priority to a selection of private hospitals for treatment. The data are restricted to the customers of private hospitals in the three big multi speciality private hospitals of Manipur and the results therefore may not be generalised to all the health care providers.

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## Growth and Performance of Turnover in Capital Market Segment at the National Stock Exchange

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### ABSTRACT

Trading on NSE's capital market segment has been witnessing a substantial growth over the years. With the increase in volumes, efficient and transparent trading platform, a wide range of securities like equity, preference shares, debt warrants, exchange traded funds as well as retail government securities, NSE upholds its position as the largest stock exchange in the country. Today, India can boast this fact as almost 100% trading takes place through electronic order matching. NSE chose to harness technology in creating a new market design. This paper examines the growth and performance of turnover in capital market segment at NSE which is based on secondary information collected from NSE, SEBI and RBI publications. The data relates to the period from 1994-95 to 2009-10 (April-May). The analyzed information shows that NSE is growing and leading exchange in the country in respect of turnover. Hence, the stock market has witnessed fundamental institutional changes, resulting in drastic reduction in transaction costs and significant improvements in efficiency, transparency and safety which led the National Stock Exchange to do a remarkable task for the economic development of the country and to promote professionalism in the capital market for providing better securities trading facilities to investors nationwide.

**Key Words:** Capital Market Segment at NSE, Turnover Ratio, Listed and Permitted securities, Turnover of Stock Exchanges, Average daily turnover of NSE and BSE.

The trading on stock exchanges in India used to take place through open outcry without use of information technology for immediate matching or recording of trades. This was time consuming and inefficient way of trading (Khan, 2005). This imposed limits on trading volumes and efficiency. In order to provide efficiency, liquidity and transparency, NSE introduced a nationwide online fully automated screen based trading system (SBTS) where a member can punch into the computer quantities of securities and the prices at which he likes to transact and the transaction is executed as soon as it finds a matching sale or buy order from a counter party (Agarwala and Agarwala, 2000). SBTS electronically matches orders on a strict price/time priority and hence cut down on time and cost (Walia, 2007). NSE became the leading stock exchange in the country, impacting the fortunes of other exchanges and forcing them to adopt SBTS also. While the Over the Counter Exchange of India (OTCEI) was the first exchange to introduce computerized trading in the year 1991, as of May 1997, there were 17 exchanges with Screen based trading system

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(Thiripalraju and Mishra, 1998). Today, India can boast that almost 100% trading takes place through electronic order matching. NSE chose to harness technology in creating a new market design. NSE is the first exchange in the world to use screen based system for trading where members have equal access and equal opportunity of trade irrespective of their location in different parts of the country as they are connected through a satellite network. The system helps to integrate the national market and provide a modern system with a complete audit trail of all transactions. It uses satellite communication technology to energize participation from about 2956 VSATs from nearly 245 cities spread all over the country. NSE was given recognition as a stock exchange in April 1993 and started operations in June 1994, with trading on the Wholesale Debt Market Segment. Subsequently, it launched the Capital Market Segment in November 1994 as a trading platform for Equities and the Futures and Options segment in June 2000 for various derivative instruments. So, the floorless automated trading system with nationwide inter-linked network of broker-dealer members, such like NSE may at one stroke resolve the inter-market difficulties faced by investors and also reduce the transaction cost for investors.

### **Segments of NSE**

NSE provides a trading platform for all the types of securities for investors under one roof. The Exchange provides trading in three segments:

#### **(i) Wholesale Debt Market Segment**

It provides the trading platform for trading of a wide range of debt securities which includes state and central govt. securities, Treasury bills, PSU bonds, Certificate of deposits, Commercial Paper etc (NSE Fact book, 2008).

#### **(ii) Futures and Options Segment**

It provides the trading in derivative instruments like Index futures, Index options, stock futures etc. Through only eight years into its operations, the Futures and Options segment has made a mark for itself globally. In Futures and Options segment, trading in S&P CNX Nifty Junior, CNX and IT index, Bank Nifty index, Nifty midcap 50 index and single stocks are available.

#### **(iii) Capital Market Segment**

It consists of all trading transactions in equity shares, preference shares and convertible debentures. This segment offers a fully automated screen based trading system known as National Exchange for Automated Trading (NEAT). This operates on a price/time priority basis and enables members from across the country to trade with enormous ease and access and efficiency. The modern stock exchange technology does not need the traditional type of brokers to match investors' orders as they used to do on the physical-trading floor. The automated Trading screens can match buy and sell orders without the intervention of brokers. Today, brokers are needed only for settlement responsibilities. NSE introduced a nationwide

VSAT driven screen based trading system.

Operations commenced in Mumbai and rapidly spread all over India. For the first time NSE introduced in India screen based trading with automated matching.

The system conceals the identity of the parties to an order or trade. This means given the same set of orders, the orders that come first receive priority in matching. When an order does not find an immediate match it remains in the system and is displayed to the whole market, till a fresh order comes in or the earlier order is modified or cancelled. The market screens at any point of time give the members complete information on the total order depth in a security, the high price, the low price, the last traded price and other information. So, this segment of NSE provides an efficient and transparent platform for trading of equity, preference shares, debentures, warrants, exchange traded funds as well as retail Government securities. The average daily turnover in the Capital Market Segment of the Exchange during 2008-09 was Rs. 11,325 crore.

#### **Growth of Internet Trading at Capital market segment**

At the end of March 2009, a total number of 349 members were permitted to allow investors' web based access to NSE's trading system. The members of the exchange, in turn, had registered 5,627,789 clients for web based access as on March 31, 2009. During the year 2008-09, 10.58% of the trading value in the Capital Market Segment Rs. 582,070 crore was routed and executed through the internet.

**Table1: Growth of Internet Trading from the Fiscal Years 2007-08 and 2008-09**

| <b>Year</b> | <b>Enabled Members</b> | <b>Internet Trading Volume (Rs. in crore)</b> | <b>% of Total Trading Volume</b> |
|-------------|------------------------|-----------------------------------------------|----------------------------------|
| 2007-08     | 305                    | 649,658                                       | 9.15                             |
| 2008-09     | 349                    | 582,070                                       | 10.58                            |

Source: NSE Publication, Fact Book 2009

#### **Review of Literature**

Massimb and Phelps (1994) presented a comparative analysis of open outcry system and electronic trading system in US on the basis of two measures of market performance, operational efficiency and liquidity. It was revealed that the decision to move from open outcry to electronic matching forces the exchanges, customers and regulators to face a trade-off between efficiency, liquidity and turnover.

Coles (1999) made an attempt to consider equilibrium a decentralized trade when buyers and sellers met costlessly. The study discussed about the turnover externality which supported multiple-pareto rankable equilibria. The crux was that the greater the flow through of new traders, the easier for everybody to trade. At last, the study revealed when turnover

externality existed, all traders better off with higher entry rates of new traders.

Prakash (2001) made a comparative analysis of BSE and NSE, i.e., leading exchanges in the country in terms of number of companies listed, returns, average daily turnover, market capitalization and the number of shares traded during the period 1994-2000 in the study. The author gave a brief account of the functioning of the BSE and NSE. The study concluded that NSE has registered a phenomenal growth during the period which comprised the entire span of existence.

Singh (2004) examined the liquidity scenario of Indian stock exchanges and raised the issues related to illiquidity. In the paper, the author explained the indicators and present position of liquidity which showed there were no trades on several companies listed on number of regional stock exchanges. This suggested illiquidity in such securities. It has been observed that the trends of liquidity of shares traded on NSE have remained constant but there has been an increase in turnover.

Khan (2005) observed the existence of close interconnection between undesirable trading practices in stock exchanges and the type, nature and structure of the key body governing the stock exchanges i.e. governing body/ board of directors that dominated by the brokers and speculative interests. The subject chosen for the study by the author was operations, turnover and trading at Indian stock exchanges. It has been concluded that stock market trading has witnessed radical changes at the dawn of new millennium.

Kato and Long (2006) highlighted executive turnover and its link to firm performance of China. The study provided that over 42 per cent of the firms have a shareholder owned more than half of the company stock and only 10 per cent had private firms as the ultimate controller whereas for 83 per cent had government firms. The study argued that in countries with weak investor protection, concentrated control and ownership of firms to monitor top executives and discipline when performance got poor.

Kumar (2008) examined the determinants of trading volume for individual stocks in the emerging India's stock market. The CMIE data was used to construct weekly turnover measures for the individual BSE and NSE stocks from January 1997 to December 2004 (418 weeks). The paper also examined the stock trading volume which increased in the level of institutional ownership and reached at its peak at 33% for NSE stocks. The study argued that behavioral factors affect investor's trading decisions in Indian equity market which had an impact on stock trading volume.

### **Objective of the Study**

The objective of the study is to examine the growth and performance of turnover in capital market segment at NSE.

### **Research Methodology**

The study is based on the secondary data. The data has been collected from the sites of SEBI, NSE and RBI. The data relates to the period from 1994-95 to 2009-10 (April-May). The research is of analytical nature in which facts, figures and information from secondary sources are used to make a critical evaluation. To explain the growth of Capital Market Segment of NSE, the variables like turnover of stock exchanges, relative share of listed and permitted securities and average daily turnover of NSE and BSE have been taken.

### **Business Growth of Capital Market Segment of NSE**

Process of liberalization and deregulation that began in late 1980s has directly affected the capital market of the country. Number of steps were taken by the government in order to bring ailing economy back to rails. In India, Capital Market Segment has the highest number of listed companies in the world and this number, as on date is more than 9000 companies. The Capital Market Segment of NSE started its operation in November 1994 (Sidhu, 2006). Trading on NSE commenced in over 200 securities and subsequently securities have been added gradually.

Turnover is often used as a proxy for liquidity (Khan, 2005). The increase in turnover has not been uniform across exchanges as is evident from Table 2. The increase in turnover took place mostly at the cost of small exchanges. Out of total 23 stock exchanges, 16 exchanges together reported less than 1% share in total turnover. Nevertheless, Table 2 reveals that only two exchanges i.e. BSE and NSE holds the majority of turnover out of 23 stock exchanges in All over India, but NSE continued to be the market leader with over 40% of market share from 1995-2000. Furthermore, the proportion of turnover of NSE shows considerable increasing trend till last except 2005-06. This is due to the introduction of internet stock trading in Capital Market Segment at NSE in February, 2000. Rest of the regional stock exchanges slowly and gradually reduced to nil.

In comparison to other years, the total turnover of all the stock exchanges witness a falling trend up to 2005-06 but the share of turnover of NSE is increasing considerably from 57% to 65% of the total turnover of all the stock exchanges. In 2006-07, with the setting up of NSE InfoTech Services Ltd. The total turnover went as high as Rs. 2903058 crore in comparison to preceding years. However, the performance of turnover widely varied among the stock exchanges while in NSE it recorded a rise of 71% followed by BSE at 29% in 2008-09. During 2009-10 (April-May) the percentage of turnover in NSE is 75% which captures the turnover of whole stock market. Hence, trading volumes in the Indian capital market are fairly large compared to those in other emerging markets. While price levels have been depressed but the total turnover on NSE and BSE is increasing. In other stock exchanges, the turnover tends to be nil because of presence of illiquid scrips in these exchanges. In just about a span of few years most of the regional stock exchanges became redundant and their business insignificant. The trading volumes in these stock





|                |         |         |        |        |         |         |         |         |         |         |        |
|----------------|---------|---------|--------|--------|---------|---------|---------|---------|---------|---------|--------|
| Hyderabad      | 6137(0) | 978(0)  | 41(0)  | 5(0)   | 2(0)    | 1.4(0)  | 89(0)   | 92(0)   | 0       | 0       | 0      |
| SKSE           | 979(0)  | 0       | 0      | 0      | 0       | 0       | 0       | 0       | 0       | 0       | 0      |
| Mangalore      | 731(0)  | 0       | 0      | 0      | 0       | 0       | 0       | 0       | 0       | 0       | 0      |
| Bhubnesh-war   | 806(0)  | 0       | 0      | 0      | 0       | 0       | 0       | 0       | 0       | 0       | 0      |
| OTCEI          | 4294(0) | 126(0)  | 4(0)   | 0      | 16(0)   | 0.01(0) | 0.01(0) | 0       | 0       | 0       | 0      |
| Madhya Pradesh | 227(0)  | 2(0)    | 16     | 0      | 0       | 0       | 0       | 0       | 0       | 0       | 0      |
| ICSEL          | 546(0)  | 233(0)  | 55(0)  | 65(0)  | 0       | 0       | 0       | 0       | 0       | 0       | 0      |
| Total          | 4872574 | 2880805 | 895818 | 968910 | 1620497 | 1666888 | 2390103 | 2903058 | 5130816 | 3852579 | 866742 |

Source: Handbook of Indian Securities Market 2008, SEBI Bulletin June 2009

Note: Figures in parentheses denote percentage of turnover of stock exchange over total turnover of stock exchanges.

exchanges took a nosedive soon after some of the major stock market reforms were put in place. The regional stock exchanges are getting marginalized day by day. What really aggravated the trend has been the extension of trading terminals of the two principal exchanges. The NSE in that sense was always an All India exchange. Competition from it drove the BSE to innovate and extend its own trading system “BOLT”. In addition, the substantial increase in turnover may also be attributed primarily to the recent expansion of the NSE’s trading network.

The increase in turnover ratio shown in Table 3 indicated that there was an increase in trading activities in NSE. Turnover statistics show that in October 1995, within the first year of its operations in equity trading, NSE became the largest exchange in terms of volume transacted. NSE grew remarkably in trading volume in the second and third year of its operation. The most significant growth rate in turnover was observed in 1996-97. The turnover ratio in NSE increased from 16.8% in 1995-96 to 82.2% in 1999-00. The turnover ratio which reflects the volume of trading in relation to size of market has been increasing by leaps and bounds after the introduction of internet based trading system by NSE.

It is evident from the table that the turnover ratio rose steeply in 2000-01 and exhibited a declining trend till 2005-06 except 2002-03. From 2006-07, the turnover ratio increased to 95.02% till 2008-09. However, in 2009-10 (April-May) i.e. of two months reported a low turnover ratio due to small period of time.

**Table3: Turnover Statistics- Capital Market Segment of NSE**

| Year    | Turnover (Rs. in Crores)<br>(I) | Market Capitalisation<br>(as at end March)<br>Rs. Crores(II) | Turnover ratio<br>(in %age)<br>(I) ÷ (II) |
|---------|---------------------------------|--------------------------------------------------------------|-------------------------------------------|
| 1994-95 | 1806                            | 363350                                                       | 0.5                                       |
| 1995-96 | 67288                           | 401459                                                       | 16.8                                      |
| 1996-97 | 294503(337.7)                   | 419367(4.5)                                                  | 70.2                                      |
| 1997-98 | 370195(25.7)                    | 481503(14.8)                                                 | 76.8                                      |
| 1998-99 | 414474(11.9)                    | 491175(2.1)                                                  | 84.4                                      |
| 1999-00 | 839050(102.40)                  | 1020426(107.71)                                              | 82.2                                      |
| 2000-01 | 1339510(59)                     | 657847(-35)                                                  | 203.6                                     |
| 2001-02 | 513167(-61)                     | 636861(-30)                                                  | 80.5                                      |
| 2002-03 | 617988(20)                      | 537133(-15)                                                  | 115.0                                     |
| 2003-04 | 1099535(77)                     | 1120976(108.08)                                              | 98.0                                      |
| 2004-05 | 1140071(30)                     | 1585585(41)                                                  | 71.90                                     |

|                    |                 |                 |       |
|--------------------|-----------------|-----------------|-------|
| 2005-06            | 1569556(37)     | 2813201(77)     | 55.79 |
| 2006-07            | 1945285(23)     | 3367350(19)     | 57.76 |
| 2007-08            | 3551038(82)     | 4858122(44)     | 73.09 |
| 2008-09            | 2752023(-22.50) | 2896194(40.38)  | 95.02 |
| 2009-10(April-May) | 649257(-76.40)  | 7939597(174.13) | 8.17  |

Source: Capital Market Segment 2009 from NSE Publication.

Note: Figures in parentheses denote percentage variation over previous year. Percentage variation in 1995-96 was not calculated as a low base of turnover.

Table 4 shows the relative share of listed and permitted securities of NSE in the total number of stocks. It may be observed from the table that the percentage share of listed securities in total traded securities at NSE was continuously increasing in comparison to permitted securities. Permitted securities are those securities which are allowed to be traded in an exchange but listed on another exchanges. So, permitted equities were allowed in the initial years when NSE was new to gain trading business. Within a short period, NSE gained popularity among investors, issuing companies and financial institutions; and the share of listed securities to total traded stock started increasing. By the end of March 1995, 135 scrips were listed on NSE with Market Capitalisation of Rs. 73,223 crore in addition to 543 permitted scrips for trading with a Market Capitalisation of Rs. 290127 crore. The trend of permitted securities shows a decline from 1994-95 to 2004-05 and totally vanish afterwards. During 2009-10 (April-May), total securities are 1425 which estimates a 100% share of only listed securities.

**Table4: Relative Share of Listed and Permitted Securities**

| Year    | No. of Listed Securities | % of Total No. of Securities | No. of Permitted Securities | % of Total No. of Securities | Total No. of Securities |
|---------|--------------------------|------------------------------|-----------------------------|------------------------------|-------------------------|
| 1994-95 | 135                      | 20                           | 543                         | 80                           | 678                     |
| 1995-96 | 422                      | 33                           | 847                         | 67                           | 1268                    |
| 1996-97 | 550                      | 37                           | 934                         | 63                           | 1482                    |
| 1997-98 | 612                      | 45                           | 745                         | 55                           | 1357                    |
| 1998-99 | 648                      | 51                           | 609                         | 49                           | 1254                    |
| 1999-00 | 720                      | 60                           | 479                         | 40                           | 1199                    |
| 2000-01 | 785                      | 71                           | 320                         | 29                           | 1105                    |
| 2001-02 | 793                      | 80                           | 197                         | 20                           | 990                     |
| 2002-03 | 818                      | 88                           | 107                         | 12                           | 925                     |
| 2003-04 | 909                      | 98                           | 18                          | 2                            | 927                     |

|                        |      |      |   |     |      |
|------------------------|------|------|---|-----|------|
| 2004-05                | 970  | 99.9 | 1 | 0.1 | 971  |
| 2005-06                | 1069 | 100  | - | -   | 1069 |
| 2006-07                | 1228 | 100  | - | -   | 1228 |
| 2007-08                | 1381 | 100  | - | -   | 1387 |
| 2008-09                | 1432 | 100  | - | -   | 1432 |
| 2009-10<br>(April-May) | 1425 | 100  | - | -   | 1425 |

Source: Handbook of Statistics on Indian Securities Market 2008, SEBI Publication

Table 5 highlights that the average daily turnover on NSE (Rs.276 crore) surpassed that of BSE (Rs.216 crore) in 1995-96 and the trend has continued till 2009-10(April-May). The main reasons for the high daily turnover registered on the NSE have been efficient and reliable clearing and settlement system through National Securities Clearing Corporation Limited (NSCCL), lending and borrowing of securities at market determined rates through Automated Lending and Borrowing Mechanism (ALBM), holding and handling of securities in electronic form through National Securities Depository Limited (NSDL) and settlement is guaranteed on the exchange through capital. The difference between the average daily turnover recorded was as high as 63% in 1996-97. However, this difference has considerably come down to 46% in 1997-98 and 30% in March 1999-2000 (Prakash, 2001). It is clear that the gap between the BSE and the NSE has narrowed down so far as average daily turnover is concerned and the NSE is slowly losing its edge over the BSE because of the expansion of the BSE's online trading system outside Mumbai in August 1997. In 2000-01 the average daily turnover on NSE has increased considerably because NSE has installed 2513 VSATs in 307 cities as compared to BSE which has 890 as on March 31, 2001. In 2001-02, both exchanges showed a negative trend. During the other years, NSE's average daily turnover has decreased considerably up to 2005-06 but higher than that of BSE. In 2007-08, the average daily turnover on NSE (Rs. 14148 crore) has increased due to the Launch of Gold BeES- Exchange Traded Fund, i.e., first gold ETF. The growth of average daily turnover has declined in NSE by -16.65%, due to recession in the stock market in 2008-09. In 2009-10 (April-May), the average daily turnover on NSE (Rs.17547 crore) is increasing and surpassing that of BSE (Rs. 5878 crore). The overall analysis highlights that annual average growth rate in NSE is higher than that of BSE.

**Table 5: Comparison of Average Daily Turnover of NSE and BSE (Rs. in crore)**

| Year    | NSE          | BSE         |
|---------|--------------|-------------|
| 1995-96 | 276          | 216         |
| 1996-97 | 1176(326.08) | 517(139.00) |
| 1997-98 | 1520(29.25)  | 849(64.00)  |

|                    |               |              |
|--------------------|---------------|--------------|
| 1998-99            | 1651(8.00)    | 1279(50.00)  |
| 1999-00            | 3303(100.00)  | 2735(113.00) |
| 2000-01            | 5337(61.00)   | 3984(45.00)  |
| 2001-02            | 2078(-61.00)  | 1244(-68.00) |
| 2002-03            | 2462(18.00)   | 1251(0.00)   |
| 2003-04            | 4329(75.00)   | 1981(58.35)  |
| 2004-05            | 4471(3.00)    | 2050(3.00)   |
| 2005-06            | 6253(39.00)   | 3251(58.00)  |
| 2006-07            | 7812(24.00)   | 3840(18.00)  |
| 2007-08            | 14148(81.00)  | 6290(63.00)  |
| 2008-09            | 11325(-19.95) | 4527(-28.02) |
| 2009-10(April-May) | 17547(54.94)  | 5878(28.73)  |
| AAGR               | 52.73         | 38.86        |

Source: Handbook of Indian securities market 2008, SEBI Bulletin, June 2009.

Note: parentheses show the percentage increase to previous year.

AAGR: Annual Average Growth Rate.

## Conclusion

Capital Market Segment of NSE has been continuously growing during the period. The share of turnover of NSE is the largest as compared to other stock exchanges. Although a number of listed companies on NSE are much less as compared to the BSE, the NSE has surpassed all records set by the BSE (a 125 year old exchange) in terms of average daily turnover. This is because the NSE has a completely mechanized trading system which includes VSATs connections, separate clearing and settlement system through NSCCL; the depository system through the NSDL, ALBM at market determined rates, online surveillance system. It is worth mentioning here that in a small span of its life, NSE has scored over all the stock exchanges in respect of turnover. In addition, regulatory authority, i.e., SEBI should maneuver such type of platforms to remove illiquidity from regional stock exchanges so that they are able to gain trading business like NSE, a leading exchange in the country. While government and regulatory authorities will have a greater role to play in promoting co-operation, the stock exchanges at their individual level have to take keen interest and initiate measures that would promote greater inter-exchange co-operation helping each other on overcoming shortfalls and setbacks. A fair degree of co-operation is required within the stock exchanges in the country to avoid imprudent practices and inducements that will be harmful to the health of the markets. The market has witnessed

fundamental institutional changes, resulting in drastic reduction in transaction costs and significant improvements in efficiency, transparency and safety which led the National Stock Exchange to do a remarkable task for the economic development of a country and to promote professionalism in the capital market for providing better securities trading facilities to investors nationwide.

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# Calendar Anomalies in the Bourses of South Asia

Dr. Ravikant Swami

## Abstract

This paper investigates four calendar anomalies, viz., Day of the Week effect, Monthly effect, Turn of the month effect and Month of the year effect across five countries of South Asia. The day of the week effect, have been found to exist in Sri Lanka and Bangladesh; and the intra-month return regularity, in terms of Monthly effect and Turn of the month effect, is present in the Indian market. The Month of the year effect has not been found in any of the five countries studied. The anomalous behavior is not pervading across the five countries and there is little influence of one market over the other, so far as calendar anomalies are concerned. However, appropriate hedging strategies may be designed to exploit the observed regularities profitably after taking into consideration the transaction costs. The findings outline the advantage from investment at the turn of the month and during the first half, as opposed to the rest of the month.

## 1. Introduction

SEVERAL STRIKING CALENDAR anomalies have been observed for stock return series across different countries and time periods. One of these puzzling anomalies is the significantly negative average stock return on Monday. This phenomenon, usually referred to as the 'Monday Effect' or the 'Weekend Effect', has been documented by numerous studies in the US and around the world applying different stock indices across various time periods (Cross, 1973; Keirn and Stambaugh, 1984; Rogalski, 1984; Harris, 1986; Jaffe and Westerfield, 1985). However, this seasonality is not confined to Monday alone. Studies in some countries of Europe and Asia have revealed that stock returns are unusual on Tuesday and even on Wednesday, thereby claiming daily regularities for other days of the week as well (Solnik and Bousquet, 1990; Dubois and Louvet, 1996; Lee et al, 1990). Another anomaly that has received wide attention among finance researchers is the monthly pattern of stock returns. They have reported two prominent anomalies in the monthly stock price behavior. One of these is the 'Monthly Effect', which implies that the mean return for stock is positive and higher during the first half of the month than on the second half (Ariel, 1987; Jaffe and Westerfield, 1989). The other anomaly reported is the 'Turn of the Month Effect', which is said to exist when the average daily return at the turn of the month is significantly higher than the daily return on the remaining days of the month (Lakonishok and SII}idt, 1988; Chang, 1991). Both these anomalies have been documented first for the US and then confirmed for several countries. However, there have also been some markets, which have shown either a reverse monthly pattern, or no pattern at all (Chang, 1991).

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Yet another important intriguing anomaly that has been widely studied and reported in the academic literature, is the January effect. Different researchers observed that mean return for January is unusually high in comparison with that of remaining months of the year (Rozeff and Kinney, 1976; Banz, 1981; Reinganum, 1981; Keim, 1983; Gultekin and Gultekin, 1983; Aggarwal and Rivoli, 1989). This phenomenon is referred to as the January effect. While for some markets, this phenomenon has been confirmed, some other markets have shown significant returns for some other months (Gultekin and Gultekin, 1983).

In the light of the evidence of such curious anomalies in several countries, it is of interest to investigate the stock return behavior across the week, month and year in the stock markets of South Asian Countries, which have adopted the strategy of stock market-led growth of their economies. The imperatives of globalization necessitate increasing interdependence in terms of business, politics and cross-cultural activities. Consequently, capital markets in South Asia can no longer afford to remain apart from one another and yet continue to carry on business unaffected by events across political and geographical boundaries. As capital markets are no longer insulated, it may be important to examine whether the calendar anomalies pervade across the markets of South Asia and is there any influence of one market over the other. A study investigating into the various anomalies will add to the understanding of the behavior of the stock prices in these countries and enable stock market participants to design trading strategies on the basis of observed anomalies. Although some studies are available in the Indian context depicting high Friday returns, high returns in the first half and turn of the month and no January effect; the time period covered in the studies is upto the early 1990s (Chaudhury, 1991; Karmakar and Chakraborty, 2000a and b; Chakraborty, 1999) and hence calls for a fresh look into the issues. So far as the other markets of South Asia are concerned, no such study has been available to us. Hence, this paper aims to examine the calendar anomalies in the bourses of five major South Asian countries, viz., India, Sri Lanka, Pakistan, Bangladesh and Nepal.

For this purpose, the following issues will be addressed:

- ♣ Is there any day of the week effect in these stock markets?
- ♣ Is the average daily return of the first half of the month significantly different from that of the second half (i.e., the Monthly effect)?
- ♣ Is the average daily return at the turn of the month significantly different from that of the remaining period of the month (i.e., TOM effect)?
- ♣ Is there any month of the year effect in these stock markets?

Acceptance of the hypotheses of equality of returns across the week, month, etc., implies that stock returns do not exhibit any seasonality. If, however, the hypotheses are rejected, it will be evidence in favour of the various anomalies, which may pose a question to market efficiency. The remainder of the paper is organized as follows- Section II discusses

the data and methodology; Section III presents the empirical findings on the issues raised above. The study is wound up with concluding remarks in Section IV.

## II. Data and Methodology

The data to be used in the present study are the major daily index of each country provided by the respective stock exchanges. The indices that are considered for the different countries are BSE Sense x for India for the period from January 1, 1991 to Decemeber 2001; Milanka Index] for Sri Lanka for the same period; KSE-100 Index for Pakistan from January 1, 1996 to April 2002; All Share Price Index or the General Index for Bangladesh for the period from January 1991 to December 2001 and Nepse Index for Nepal from July 1997 to December 2001 respectively. The time period of the study varies from country to country depending on the availability of data.

Contemporary finance theories, i.e., the market models are tested in terms of returns rather than prices. The widely accepted concept of rates of return is, of course, the logarithmic difference of prices of two successive periods. This concept is followed in the present study, too.

With the data set described above, the daily returns have been calculated as follows:

$$R_t = L_n (P_t / P_{t-1}) \cdot 100$$

where,  $R_t$  is the continuously compounded percentage change of share price index for the period  $t$ ,  $P_t$  is the price index at  $t$  and  $P_{t-1}$ , is the same for preceding period,  $L_n$  is the natural logarithm.

To make a test of the day of the week and month of the year anomalies, we have mainly applied parametric method of dummy variable regression equations. We have used different equations for testing different anomalies, the dummy variables of which have been defined separately.

For example, to make a test of the day of the week effect, we have used the following regression.

$$R_t = \alpha_1 D_{1t} + \alpha_2 D_{2t} + \dots + \alpha_5 D_{5t} + e_t \quad (\text{eq. 1})$$

where,  $R_t$  is the return to the Share Price Index on day  $t$ , and  $D_{1t}, D_{2t}, \dots, D_{5t}$  are binary dummy variables for the various days of the week, Monday, Tuesday, ... , Friday respectively (i.e.,  $D_{it}=1$ , if day  $t$  is a Monday, zero otherwise etc.) and  $e_t$  is the error term. The coefficient  $\hat{\alpha}_1$  to  $\hat{\alpha}_5$  as are mean returns for Monday to Friday, respectively.

In order to test the presence of any day of the week effect, we have tested the null hypothesis (HO) against the alternative hypothesis (H1)

Hypothesis HO:  $\alpha_1 = \alpha_2 = \alpha_3 = \alpha_4 = \alpha_5$

Hypothesis H1:  $\alpha_1 \neq \alpha_2 \neq \alpha_3 \neq \alpha_4 \neq \alpha_5$

Similarly, to make a test of the month of the year effect, we use the regression

$$R_t = \alpha_1 D_{1t} + \alpha_2 D_{2t} + \dots + \alpha_{12} D_{12t} + e_t \quad (\text{eq. 2})$$

Where,  $R_t$  is the return to the Share price Index on the month  $t$  and  $D_{1t}, D_{2t}, \dots, D_{12t}$ , are binary dummy variables for the various months of year, January, February, ....., December respectively.

To investigate if there is any month of the year effect, we will test the null hypothesis (H0) against the alternative hypothesis (H1)

Hypothesis H0:  $\alpha_1 = \alpha_2 = \alpha_3 = \alpha_4 = \dots = \alpha_{12}$

Hypothesis H1:  $\alpha_1 \neq \alpha_2 \neq \alpha_3 \neq \alpha_4 \neq \dots \neq \alpha_{12}$

In case, the F-test rejects the null hypothesis of equality of mean returns across days of the week or months of the year, we shall apply the t-test to identify the particular day or the month causing the inequality.

To investigate whether there exists any intra month return regularities, we shall use the t-statistics, which will help us to examine whether the mean returns on first half of the month are significantly different from that of the second half. Again, with the same t test, we shall investigate whether the average returns at the turn of the month are significantly different from the average returns on the remaining days of the month.

### III Empirical Findings

#### 3.1 Day of the Week Effect

The sample means have been calculated for all the five markets under consideration. The regression equation explained above has been run on the sample returns and F-statistics computed accordingly. The sample statistics are reported in Table-I. In case of India, Pakistan<sup>2</sup> and Nepal<sup>3</sup>, the equality of mean returns cannot be rejected. The mean returns across days are thus, essentially very close to each other and no single day seems to dominate the scene. Thus, there appears to be no day of the week anomaly in these three stock markets for the period under review. It may be noted here that several prior studies<sup>4</sup> have shown the existence of a Friday anomaly in the Indian bourse. Probably the previous findings have had an impact on the trading pattern, which have gradually nullified the anomaly.

In case of Sri Lanka and Bangladesh<sup>5</sup>, however, there appears to be a significant F-statistic. Equality of mean returns is rejected for both the markets, p-values being 0.022 and 0.007 respectively. This rejection is also confirmed by calculating the t-statistics for

the different days of the week for these two countries, which are also reported in Table 1.

**Table-1: Means and test-statistics of the percent returns by day of the week**

|             | India  | Sri Lanka |              | Pakistan | Bangladesh |              | Nepal  |
|-------------|--------|-----------|--------------|----------|------------|--------------|--------|
| Monday      | 0.0451 | 0.0189    | (t=-0.379)   | -0.0143  | -0.1617    | (t=-2.086**) | 0.0213 |
| Tuesday     | 0.0409 | -0.0815   | (t=-1.645**) | -0.0402  | 0.0094     | (t=0.111)    | 0.0145 |
| Wednesday   | 0.1007 | -0.0353   | (t=-0.667)   | 0.1577   | 0.0075     | (t=0.129)    | 0.0146 |
| Thursday    | 0.0067 | 0.0300    | (t=0.578)    | 0.0306   | 0.2124     | (t=3.206*)   | 0.0562 |
| Friday      | 0.0325 | 0.1446    | (t=2.955*)   | -0.0543  | -          |              | 0.1330 |
| Saturday    | -      | -         |              | -        | 0.1320     | (t=1.944**)  | -      |
| Sunday      | -      | -         |              | -0.5250  | -0.0180    | (t=-0.225)   | 0.0734 |
| F-statistic | 0.1540 | 2.8550    |              | 0.4840   | 3.1690     |              | 0.2710 |
| p-value     | 0.9610 | 0.0220    |              | 0.7890   | 0.0070     |              | 0.9290 |

Note: \* Significance at 1% level.

\*\* Significance at 5% level.

The t-statistics shown in the table indicate that in Sri Lanka, the mean daily return on Friday is significantly positive at 1% level and the average return on Tuesday is significantly negative (5% level). Thus there appears to be a 'Tuesday effect' and 'Friday Effect' in the Sri Lankan stock market. In case of Bangladesh, return on Monday is significantly less than zero at 5% level and that for Thursday and Saturday are positive and significantly different from zero at 1% and 5% respectively. The day of the week effect in Sri Lanka and Bangladesh has been investigated following different approaches. The results reveal that the distributions of daily stock returns vary by day of the week. There appears to be a 'Tuesday effect' and 'Friday effect' in Sri Lanka and a 'Monday Effect' as well as 'Thursday and Saturday effect' in the Bangladesh stock market. The results are in favor of high weekend return, weekend being on Friday in Sri Lanka and on Thursday in Bangladesh. The significant negative returns on Monday, which in Bangladesh falls in the middle of the week, can be compared to that of negative 'Tuesday effect' in Sri Lanka as well the findings of other countries, where a significantly negative return on Tuesday or Wednesday (middle of the week) has been reported (Solnik and Bousquet, 1990; Dubois and Louvet, 1996; Lee et al, 1990). However, the 'Saturday effect' found in the Dhaka bourse is a surprising phenomenon. Saturday is the beginning of the week in the country and the existing literature does not provide any evidence of significantly high returns on a day in which the week begins. In fact, this is at direct odds with the findings in other countries, including the west, where a negative Monday (beginning of the week) return has been reported.

### 3.2 Intra Month Return Regularities

Here we shall examine both the monthly effect and the turn-of-the-month effect using the mean returns of calendar days of the month. Since the turn of the month (i.e., the days 30, 31 of the previous month and 1 and 2 of the current month) is conventionally assumed in similar studies to be a part of the first half, the last two days (30, 31) of the previous month are included in the first half of the month. Thus the first half includes 16 days (last two days of previous month 30 and 31 and upto 14<sup>th</sup> day) and second half contains 15 days (15 to 29).

To test the monthly effect, we test the null hypothesis:

“Mean daily return in the first half of the month is equal to the mean daily return in the second half of the month”.

Table-2 displays the mean and standard deviation of calendar day returns of the two halves, along with the t-statistic to test the difference of the two mean returns. The t-statistic indicates that, in case of India, the average calendar days return in the first half of the month is significantly higher than that of the second half at 5% level of significance. Hence, there is evidence of monthly effect in the Indian stock market. For the rest of the markets, the t-statistic indicates that the average calendar days return in the first half of the month is not significantly higher than that of the second half at any reasonable level of significance. Hence, there is no evidence of monthly effect in those stock markets.

**Table-2: Difference of means test comparing returns at the first half of the month with returns at the second half of the month**

|            | Average return on first half of the month | Average return on second half of the month | T-statistic |
|------------|-------------------------------------------|--------------------------------------------|-------------|
| India      | 0.2827                                    | 0.0175                                     | 2.0617*     |
| Sri Lanka  | 0.0368                                    | -0.0240                                    | 1.3392      |
| Pakistan   | 0.0543                                    | -0.0216                                    | 0.7658      |
| Bangladesh | 0.0286                                    | 0.0297                                     | -0.0185     |
| Nepal      | 0.0569                                    | 0.0281                                     | 0.3613      |

Note:\* Significance at 5% level.

Investment advisors have argued that US stock experience substantial price rise at the turn of the month. In order to test whether a turn of the month effect exists in South Asia as well, we shall test the null hypothesis:

“Mean daily return at the turn of the month trading days is equal to tile mean daily return across the remaining days of the month.”

The turn of the month as defined above is the period from 30<sup>th</sup> and 31<sup>st</sup> calendar days of previous month to 1<sup>st</sup> and 2<sup>nd</sup> calendar days of the current month (30, 31, 1, and 2). Table III exhibits that in case of India, daily return at the turn of the month, is higher than the remaining days, and is significantly different from it as indicated by the t-test. The t-statistic is significant at 5% level of significance.

The results thus indicate the presence of turn of the month effect, too, in the Indian market. Observation of Table III suggests that, in case of other markets daily return at the turn of the month is not significantly different from the rest of the month as indicated by the t-test. The t-statistic is not significant at any reasonable level of significance. The results thus do not indicate a turn of the month effect in the bourses of other four markets studied.

**Table-3**

|            | Average return on<br>turn-of-the-month | Average return on<br>remaining calendar days | T-statistic |
|------------|----------------------------------------|----------------------------------------------|-------------|
| India      | 0.2827                                 | 0.0175                                       | 2.06170*    |
| Sri Lanka  | 0.0886                                 | -0.0036                                      | 1.28230     |
| Pakistan   | 0.1807                                 | -0.0044                                      | 0.18990     |
| Bangladesh | 0.0664                                 | 0.0246                                       | -0.55710    |
| Nepal      | 0.0703                                 | 0.0388                                       | 0.25690     |

Note: \* Significance at 5% level.

### 3.3 Month of the Year Effect

The sample means and for monthly returns have been calculated and reported in Table IV. The regression equation (2) has been used to test whether any particular month shows any significant returns. The results of F-statistic suggest that the null hypothesis of equality of mean returns cannot be rejected at any reasonable level of significance for all the countries studied. The mean returns, thus, do not vary across months.

**Table-4: Means and F-statistics of percent returns by Month of the Year**

|          | India   | Sri Lanka | Pakistan | Bangladesh | Nepal   |
|----------|---------|-----------|----------|------------|---------|
| January  | 4.2035  | 0.4994    | 7.3468   | 0.7484     | 0.7237  |
| February | 7.2029  | 0.4646    | 5.0638   | -5.2183    | -1.6803 |
| March    | -0.9214 | -2.3662   | -0.7722  | -0.2986    | 1.8775  |
| April    | -0.7635 | -0.0401   | 0.5531   | -4.0329    | -0.3134 |
| May      | -0.2938 | -2.4380   | -7.4182  | 3.0692     | -0.8119 |
| June     | 1.1672  | 1.4088    | -5.2612  | 5.9655     | 1.2778  |

|             |         |         |         |         |         |
|-------------|---------|---------|---------|---------|---------|
| July        | 0.4411  | 3.0423  | 3.5899  | -0.4345 | 1.1543  |
| August      | 3.1325  | -3.3447 | -2.3490 | -2.1511 | 1.3703  |
| September   | -1.4089 | -0.0707 | 1.4909  | 4.6424  | 1.1618  |
| October     | -3.9021 | 2.6111  | -0.9593 | 6.7892  | 4.0597  |
| November    | -0.3426 | 1.6935  | 1.2290  | -0.9352 | 4.3799  |
| December    | 2.7788  | 3.0063  | -0.4083 | -2.8054 | -3.7189 |
| F-statistic | 1.0600  | 0.6620  | 0.7840  | 1.3470  | 0.5290  |
| p-value     | 0.3990  | 0.7720  | 0.6550  | 0.2070  | 0.8720  |

#### IV. Conclusion

In this study, we have investigated four calendar anomalies, viz., Day of the Week effect, Monthly effect, Turn of the month effect and Month of the year effect across five countries of South Asia. The day of the week effect, have been found to exist in Sri Lanka and Bangladesh. The Tuesday and Friday returns have been found to be negatively and positively different from zero respectively for Sri Lanka, while in case of Bangladesh, the returns on Monday is significantly negative and that on Thursday and Saturday are significantly positive. Some tentative propositions have been put forth by researchers, to explain the weekly anomaly observed in other countries, such as timing and pattern of individual and institutional trading (Osborne, 1962; Penman, 1987), settlement procedures (Lakonishok and Levi, 1982), and investor psychology, (Rystrom and Benson, 1988), but in-depth research is called for to explain the phenomenon observed in these two countries. The rest of the countries have not experienced any day of the week anomaly for the period covered by the study. The intra-month return regularity, in terms of Monthly effect and Turn of the month effect, is present in the Indian market, where the mean return at the first half and Turn of the month are significantly higher than that of the second half and non-turn of the month days respectively. Explanations attempted by researchers were turn-of-the-month cash flow hypothesis, (Ogden, 1987; Cadsby and Ratner, 1992; Ziemba, 1991), problem of data mining and reflection of positive earnings news (Karmakar and Chakraborty, 2000b). Future research may delve into these possibilities more rigorously. This intra-month regularity, which has been revealed for India, has not been found for the other four countries. The Month of the year effect does not occur in any of the five countries studied. It may be noted that while some regularity or the other has been found for India, Sri Lanka and Bangladesh, no such anomaly has been revealed for Pakistan and Nepal.

Thus, the anomalous behavior is not pervading across these five countries and there is little influence of one market over the other, so far as calendar anomalies are concerned. However, the regularities that have been observed could be exploited profitably by designing trading rules on the basis of the reported anomalies. For example, one simple

trading strategy based on the weekend anomaly in Sri Lanka and Bangladesh would be for an investor to purchase the index portfolio at any day of the first part of the week (not Monday in case of Bangladesh) and to sell these investments at the weekend. Similarly, the existence of monthly and turn of the month effects in the Indian stock prices suggests that traders may earn higher returns by the strategy of making purchases during the second half of a month and executing sales in the first half, especially during the turn of the month. In other words, the findings point to the advantage from investment at the turn of the month and during the first half, as opposed to the rest of the month. Of course, one cannot ignore the transaction costs, as this is an important determinant of how much profit one would earn.

The active trading strategy based on the knowledge of market anomalies would not benefit the investors only; the countervailing arbitrage will exploit the excess return over time, leaving no further scope of 'poaching'. The observed anomaly may eventually disappear and pave the way to make the market more efficient.

### Notes

1. The Milanka Price Index (MPI) was introduced in January 1999 replacing the Sensitive Price Index (SPI). Hence, in this study, we consider the Sensitive Price Index from January 1991 to December 1998 and Milanka Price Index from January 1999 to December, 2001.
2. It seems in the year 1996 and upto February 1997, trading took place on Sundays, instead of Fridays in Pakistan. Later on, Sunday became a holiday and Friday a trading day.
3. In Nepal Stock Exchange, trading took place on Sunday also upto August 1999. 4. See for example, Chaudhury (1991); Karmakar and Chakraborty (2000a).
4. In Bangladesh, there are six trading days. Friday is the weekly holiday and Sunday is a trading day unlike other countries studied.

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## Corporate Social Responsibility Initiatives of Oils PSUs in Assam: A case study of ONGC

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### **Abstract:**

Corporate Social Responsibility (CSR) has become a much-discussed subject in the present business world. CSR has become a pivotal issue to the corporate houses as business have to meet society's expectations in their practices. Nowadays, businesses operate in an environment in which societal concerns have been given top priority. CSR can be seen as an obligation of the business world to be accountable to all of its stakeholders – not just its financial one. An attempt has been made, in this paper to highlight some of the valuable social initiatives undertaken by the ONGC(Oil and Natural Gas Corporation) a leading Oil and gas PSU operating in Assam.

**KEY WORDS:** Corporate social responsibility (CSR), Public sector unit (PSU), Stakeholders, Strategic corporate responsibility (SCR), Corporate social performance (CSP).

### **Introduction:**

All organizations have an impact on society and the environment through their operations, product or services, and their interactions with key stakeholder groups including employees, customers, suppliers, investors and the local community. There is no single, commonly accepted definition of the notion of Corporate Social Responsibility and the concept is often used interchangeably with other terms including corporate governance, corporate citizenship, corporate accountability, business ethics, corporate responsibility and sustainability. Moreover definition vary in different cultural and national settings. The legally defined mandate of today's corporation is to pursue relentlessly and without exception, its own self interest, regardless of the often harmful consequences it might cause to others. From the 1950s till date, the concept of CSR has gained considerable acceptance and the meaning has been broadened to include additional components. Corporate Social Responsibility in a globalized industrial world is about making the business investment and the community promise sustainable for the company and for the communities they operate in, its people and environment. It demands responsible governance-based on principles of leadership, integrity, respect, commitment and relationships. Philosopher Ayn Rand contends that our one and only social responsibility is to ourselves, but this concern

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does not act as a barrier to helping others. The moral purpose of one organization is the achievement and profit without harming any of its stake holders. This does not mean that the organization is indifferent to all men, that human life is of no value to it and that it has no reason to help others in an emergency – but it does not even mean that it should subordinate his life to the welfare of the others, that it does not sacrifice itself to their needs, that the relief of his suffering is not his primary concern, that any help he gives is an act of generosity, not of moral duty.

The researcher has made an effort to find out the initiatives taken by the ONGC, for the society at large without compromising their profit and efficiency. On the other hand, it has grown up with a positive image in the eye of local people. The social and environmental initiatives have been widely acknowledged globally. Through such efforts thousands of people are benefitted locally and nationally. Here, effort has been made to find out specific benefit offered to the people of Assam by ONGC and its impact at large.

### **Literature Review:**

The beginning of the debate on CSR is marked by a landmark study commissioned by the Federal Council of Churches of Christ in America, entitled “The Social Responsibility of Business Man” (1953) authored by Bowen. Yet, two years earlier, in May 1951, Frank Abrams, a top executive with Standard Oil, published a remarkable piece of reflection on “Management’s Responsibilities in Complex World” in the Harvard Business Review, a title that seems even more topical today than almost sixty years ago. Abrams urged his fellow managers, i.e., businessmen, to think of themselves as professionals with an explicit sense of duty not just to shareholders, employees, and customers, but also to the public in general: “management must understand that the general public – man and women everywhere – have a very deep interest in, and are affected by, what is going on”. He, thus, introduces an early stakeholders perspective. Bowen’s study, in contrast, is concerned with detailing the specific social responsibilities of businessmen. He argues that businessmen must assume “ a large measure of responsibilities if the economic system of free enterprise is to continue and prosper”, appealing to enlightened self interest. And although Bowen addresses questions such as “ What constitute good citizenship for a business enterprise? How does a moral enterprise behave? Or what kind of business decisions promote the end of modern society and what kinds detract?” His and Abrams’ early contributions focus on the responsibilities of individuals within an enterprise or corporation. Thus, in hindsight the beginning of CSR is in fact marked by a discussion on individual responsibilities of managers vis-à-vis their constituencies and society in general. Put differently, CSR was more like “SR” – social responsibility – and inextricably bound up with the responsibilities of executives.

It was not until the 1960s, however, that academia took serious notice of the

emerging interest in CSR and the level of analysis still continues to be focused predominantly on the individual manager, or “businessman” for that matter. It is Milton Friedman’s piece on CSR (1970), which first appeared in the *New York Times Magazine*, that arguably had the most sustainable impact. Friedman famously claimed “that the social responsibility of business is to increase its profits (and nothing else)”. He argues that business and corporations have in fact no responsibilities, in contrast to a corporate executive (i.e., the individual). As a business person and “an agent serving the interest of his principal” the executive has direct responsibility to the principal, namely “to conduct business in accordance with their desires, which generally will be to make as money as possible while conforming to the basic rules of the society, both those embodied in law and those embodied in ethical customs.

But the 1970s are also marked by serious attempt to define CSR more broadly. The Committee for Economic Development (1971) which, came up with a multilevel perspective: the inner circle consisting of a corporations basic economic responsibilities, the middle level of “current social and environmental concern” and the outer circle of “emerging responsibilities”. Moreover, CSR is defined as “enlightened self interest” (Steiner, 1971), as what goes beyond obeying the law in terms of “what every good citizen does.....” (Davis, 1973), According to Maak-2008 CSR refers to “good corporate citizenship.” Eels and Walton (1974) define it as “concern with the needs and goals of society”, but it shows multiple reference to the “legal responsibility” of a corporation, to “being ethical”, doing charitable action, or ensuring legitimacy. One of the founding definition of the modern concept of CSR is much-cited four-part model of CSR by Carroll in the year 1979. According to this model, the corporation have four types of responsibilities: first the economic responsibility to be profitable; and second, the legal responsibility to abide by the laws of the respective society. These two parts are the mandatory part of business responsibility. The third responsibility is ethical and obliges corporations to do what is right, just and fair even when business is compelled to do so by the legal framework. Rather than being mandatory, the issues linked to the ethical responsibilities should lead to voluntary action by corporations, but are – as Carroll puts it – “expected” from business. The fourth area of responsibility is labeled philanthropic and describe those activities “desired” by society, such as contributing resources to various kinds of social, educational, recreational or cultural purposes.

It was in the 1980s that the discussion on CSR became at once more diverse and more theoretical: scholars inquired about corporate responsibility in more general, i.e., ethical terms and attempted to define the moral status of the corporation. The discussion around corporate moral agency (Donaldson, 1982; French, 1984; Velasquez, 1983) marked in some way the emergence of business ethics as an academic discipline. It becomes clear that corporations can indeed be considered moral agents, because they have specific intention and decision structures and thus the capacity to engage in moral decision making, to control their policies, rules, and actions and even to respond to ethical criticism, e.g., by

external stake holders (Donaldson, 1982; French, 1995). Consequently, at the same time 'stakeholders theory' was developed and put forwarded (Freeman, 1984). Moreover, Europe enters the discussion – a discussion that is propelled by “dark cases” like Bhopal (union Carbide) and Exxon Valdez; the European Business Ethics Network (EBEN) is founded in 1987 and, last but certainly not least, the Journal of Business Ethics, begins its influential work.

The years, after 1990s brought further specialization and first business ethics theories: global warming and environmental concerns shift attention to issue of sustainable development and beyond mere social towards “triple bottom line” – performance (Elkington, 1998); the speed and scope of market globalization lead to increasing concerns about 'global business ethics' (De George, 1993; Donaldson, 1989; Maak and Lunau, 1998). Moreover, Donaldson and Dunfee put forward an “Interrative Social Contract Theory” (ISCT, 1994; 1999), Ulrich (1997/2008) an “Integrative Business Ethics”, Bowie (1998) “ A Kantian Perspective” on business ethics, and the late Bob Solomon an Aristotelian, i.e., “Virtue Ethics Perspective” (1993, 1999)

Frederick (1998) divided the first fifty or so years of CSR into four phases: CSR-1 (1960s – 1970s) as “doing the right things”; CSR –2 (1980s), according to Frederick, is marked by more responsive corporate behavior toward social responsibilities, i.e., “corporate social responsiveness”; CSR -3 (1990s) is marked by compliance and Frederick imagines that CSR- 4 (Since then) will bring more on cosmological and spiritual aspects. It remains to be seen whether or not CSR will indeed become more holistic in nature. As it stands, it is a stretched out construct – may be not a “tortured” one, but certainly hard to pinpoint. It took Archie Carroll (1999) e.g., almost thirty pages to revisit 50 years of CSR and provide an evolutionary perspective of a “definitional construct.”

By “Strategic Corporate Responsibility” (Maak, 2008) connote the increasingly instrumental use of CSR as a strategic positioning device in the post-Enron environment. In order to succeed in an environment of contested values (Diermeier, 2006) CSR is “used” for reputational gains; CSR strategy in and of corporations is seen as a means to gain competitive advantage on “the market for virtue” (Vogel, 2006). Not surprisingly, the number of CSR reports has risen exponentially in recent years, demonstrating just how responsible corporations behave and that they should be trusted as good citizens around the world. Yet, the way CSR has been transformed into “strategic Corporate Responsibility” since the beginning of the millennium leaves the door wide open for moral hypocrisy (Bateson et al., 2006), i.e., it may motivate corporations to appear moral without bearing the costs and consequences of actually being moral.

CSR as “strategic corporate responsibility” ranges from risk and reputation management (Fombrum, 1996; Jackson, 2004) and measure to enhance client focus and benefits (Kotler and Lee, 2005) to initiative in which “ social and business benefits are large and distinctive” (Porter and Kramer, 2006). Consequently, Burke and Logsdon (1996)

define CSR as strategic “when it yields substantial business-related benefits to the firm.” Moreover, Porter and Kramer (2006) as leading proponents of instrumental theory argue that “the essential test that should guide CSR is not whether a cause is worthy but whether it presents an opportunity to create shared value”. Consequently, corporations should engage in “truly strategic CSR”; “it’s about choosing a unique position – doing things differently from competitors” In other words, CSR is no longer considered a social or even a moral obligation of a corporation to society at large, but a mere market opportunity to achieve competitive advantage.

A study by Professor Stephen Erfle and Michel Frantantuono found that firms that were ranked highest in terms of their record on a variety of social issues had greater financial performance because such practices are capable of enhancing brand value of positive publicity. Zairi(2000) proposes that given the proven impact of social responsibility on business performance and corporate image, CSR should be included in business excellence models. By extrapolation, it can be argued that if CSR impacts on factors including company reputation and corporate image, that it shares characteristics with, and therefore can be regarded implicitly as an integral component of at least some models of corporate identity.

#### **Objectives of the Study:**

The prime objective of the study is to generate information about the CSR activities undertaken by the ONGC in Assam with special reference to social initiatives for the development and the perception of the local people regarding their CSR activities. Further, to assess the impact of CSR activities on socio-economic development of rural population in Assam.

#### **Methodology:**

The study is based mainly on both primary and secondary data. Primary data were collected through field visits in different places of Assam and some interaction with the company officials and local people. Secondary are collected from company’s annual reports, magazines and websites. Some reputed journals in the field of business ethics and corporate responsibility were also consulted for getting valuable information with regards to social initiatives undertaken by the ONGC.

#### **Oil PSUs and Government:**

Considering the importance of CSR, Government of India has taken effective measures to make it implement through PSUs. Guidelines have been set up for the public sector undertakings for discharging their social commitments. Public sector oil companies like ONGC, Indian Oil, Gail India, BPCL, HPCL and Oil India spent .75% Of their net profit till 2008. From the financial year 2008-09, Government of India has fixed, that PSUs under Oil and Gas sector have to spend 2% Of their net profit for CSR activities or

on social development projects. This was announced by, Petroleum Secretary R. S. Pandey on 17<sup>th</sup> April, 2009. After steel public sector units (PSUs), the government has set a mandatory target on social welfare activities for oil PSUs. The move also could be extended to public sector companies in other sectors, i.e., the new Mining Bill has a proposal to spend 2% of their profit for local area development under CSR.

### **Corporate Social Responsibility Initiatives of ONGC in Assam:**

Despite the main concern to find more oil and gas, the ONGC have always been given top priority towards the upliftment of the less privileged sections of the society in which it operates. Since, the business generates profits, it has a philosophy to contribute for well-being of the society to improve the quality of the people amongst whom it works, to the possible extent. It is also committed to provide safe working conditions to its employees and to maintain ecological balance and protection of the environment in its operational activities. Special emphasis of pollution control and safety measure have been undertaken to prevent environmental degradation and accidents respectively.

In Assam, most of the companies in Oil and Natural Gas sector has been incurring expenditure for social cause as a part of their corporate citizenship policy. They are working in various fields, ranging from, education, employment generation, environmental protection, rural development, responsible investment, eradicating poverty to philanthropy.

Here in this paper, researcher has tried to find out specific activities done by the ONGC for upliftment of the weaker section of the society and the community, and environment at a large.

ONGC was set up by an act of parliament known as ONGC Act 1959 to take over the activities of oil and natural gas directorates set up by the Government of India in 1956. The main objectives of ONGC are maximizing production and conservation of hydrocarbons, self reliance in technology, promoting indigenous effort in oil and gas related equipment, materials and services for more efficient use of energy and development of alternate source of energy and environment protection.

ONGC has its head quarters at Dehradun with project centers and liason offices throughout the country. Regional office of ONGC for Eastern Region is at Nazira, Assam. The Eastern Regional Business Centre has three projects area, namely Dhansiri Vally Project office at Jorhat, Sibsagar Project, and Cachar project with project office at Silchar.

The ONGC has a policy popularly known as “Corporate Citizen Policy”. According to this policy ONGC has to actively involved in promoting education, healthcare, entrepreneurship and supporting water management in the community, in and around its area of operations. ONGC is also providing calamity relief throughout the country.



Education plays a significant role in the development of the society. It's progress cannot be thought of without educating its members. Considering this pivotal issue as most important, ONGC has been spending Lakhs of rupees every year to develop educational infrastructure in various primary and middle level schools of Assam. ONGC has spent about Rs.64 lakhs in two years i.e., 2004-05 and 2005-06 on education with special thrust on Information Technology. Over 140 computer were distributed to various schools, colleges and other educational institutions to spread computer awareness and make the students technology savvy.

ONGC is also offering Merit Scholarship to the student pursuing graduation or master degree in law, engineering, medical and management courses in colleges and universities in different parts of the India.

With an objective to uplift the weaker sections of the society, ONGC, Assam Asset has been spending nearly Rs. 15 lakh per annum under the SC/ST Component plan on education and training, medical care and entrepreneurship scheme for the for the members of the weaker communities. It has done some remarkable work in certain areas like, Subodh Nagar village under Cachar District which is one of the most backward villages in the area of India-Bangladesh Border. ONGC has constructed one school building and given modern furnitures, making the school model school in Cachar District.

Another vital issue for the development of the people is the better health care facility. With an attempt to assist health care and provide safe drinking water to the people in the region, ONGC has done a remarkable job. ONGC has spent more than Rs.42 lakhs in the year 2004-05 and 2005-06 on health care, drinking water scheme and medical camps. ONGC, in an extra ordinary gesture and goodwill, has given one modern mobile cancer detection unit costing Rs. 48.2 lakhs to the people of Sibsagar, Assam in the year 2005. Doctors of ONGC organize health awareness programs to promote mass consciousness for health and hygiene, including HIV-AIDS Awareness. Besides this , ONGC extends monetary assistance for the development of specialized medical facilities in some of the hospitals of Assam.

A group of Social activists drawn from diverse professions formed the Cachar Cancer Hospital Society in 1992, and approached ONGC for financial assistance for procurement and installation of CT Scan Machine in the Hospital. ONGC was kind enough to support them by donating a cobalt building and a CT guided treatment facility installed in the hospital. A CT Scan Machine, which was necessary also provided by the ONGC in 1996 for the people of Barak valley.

ONGC is running different health programmes in Assam. It is fully supporting a project known as "Aakha" the Boat of hope a mobile medical ships for tribal living in Majuli island in Assam. It also supported Shankar Nethralaya, Guahati for up gradation of Diagnostic services. ONGC is also supporting Old Age Homes at nearby area of its operation

in different places of Assam.

Understanding the need for entrepreneurship development in this backward region ONGC has implemented different entrepreneurship development programme in collaboration with different bodies of state government and NGOs.

A massive entrepreneurship scheme by way of developing and supporting genuine Self-Help Groups has been undertaken by ONGC in the Sivasagar district in collaboration with the District Administration and the State Institute of Rural Development(SIRD). Till March, 2009, 300 power tillers had been provided to different SHGs in Assam under special Swarnajayanti Gram Swarozgar Yojana (SGRY) through credit linkage from nationalized banks with the help of SIRD. In this scheme ONGC is providing 50 percent subsidy in power tillers.

To set-up an example ONGC has contributed Rs. 2 lakh for purchase of milk van, deep freezer, and cycles for distribution of milk to Sundar Pukhuri Milk Co-operative Society in collaboration with State Veterinary Department.

Yuva Samridhi is a project undertaken by ONGC for the promotion of Self-Help Groups and creation of self employment opportunities in Sivasagar district. Under the District Administration, Bank and ONGC created approximately 4000 direct employment for unemployed youth in the district.

The natural disasters like flood, cyclone and earthquake have been often wreaked havoc in Assam. ONGC has always come forward and offered immediate aid to the people in distress, through contribution to the Chief Minister's Relief Fund and NGO's like Red Cross Society of India. It also extends assistance by way of sending medical teams, distributing food packets, water, clothing and other material in the affected areas. ONGC donated Rs. 25 lacs to the Chief Minister's Relief Fund and Rs. 15 lacs to Red Cross Society for flood affected people of Assam in 2004.

ONGC has contributed Rs.7 lakhs to centre for Rural development (CRD) for the innovative project "Rickshaw Bank Guahati". Under this project it provides Rickshaws to participating pullers. In a stipulated time frame Rickshaw pullers do refund and repay minimum amount of Rs. 20 per days towards the cost of Rickshaw. By repaying the cost of the rickshaws on a daily basis, a rickshaw puller is able to repay the total cost of rickshaw in one year, and in turn, become the owner of the rickshaw.

### **Conclusion:**

Corporate social responsibility has become an increasingly significant phenomena in today's business world. Public sector corporate houses are more aware about it, and acting to the social problems more appropriately and consciously. Apart from giving

philanthropy public sector corporate houses are interested for social capacity building, through providing training and educational facilities to the weaker section of the society, developing entrepreneurial skill among the youth, and trying to make people self-employed by providing facilities to the needy. Here in Assam ONGC has played a great role in every sphere including infrastructure building, creating employment through training and education, market accessibility needs, emphasis on improving health, as well as empowering the weaker section of the people. These activities of the ONGC has put the organization in the heart of the people who are residing near the ONGC project areas. ONGC is able to create a trust and confidence among the people. This way every business organization should come forward and undertake activities relating to the social development. They should share shoulders with the government of India and also state government in this novel activities.

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