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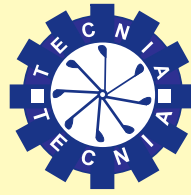


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## *From The Editor's Desk*

I take this opportunity to thank all contributors and readers for making *Tecnia Journal of Management Studies* an astounding success. The interest of authors in sending their research-based articles for publication and overwhelming response received from the readers is duly acknowledged. I owe my heartfelt gratitude to all the management institutes for sending us their journals on mutual exchange basis, and their support to serve you better.

We are happy to launch the Twenty first issue of our academic journal. The present issue incorporates the following articles:

- ❖ Botnet Detection by Monitoring DNS Traffic
- ❖ Retail Metrics and their growing role in Indian business context
- ❖ Relationship between Indian and Chinese Stock Markets: An Empirical Analysis
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My thanks to the authors, Sandip Ravindra Sonawane, Ritesh Gupta, Sanjiv Mittal, Raman Kumar Dave, Lata Rani, Sunil Kumar, Parul Kumar, Kshitij Maharishi, Anurag Agnihotri, Sunil Kumar, Gopal Jadav, Vinay Shrivastava, Sambhavana Gupta, Krishan Garg, Puja Rajvanshi, Rajesh Bajaj, Ajay Kumar, Pradeep Kumar Palei, Smita Bagai, Sandeep Kumar, Sweta Bakshi & H. B. Singh who have sent their manuscripts in time and extended their co-operation particularly in following the American Psychological Association (APA) Style Manual in the references.

I extend my sincere thanks to our Chairman Dr. R. K. Gupta, who has always been a guiding light and prime inspiration to publish this journal. I am grateful for his continuous support and encouragement to bring out the Journal in a proper form. I also appreciate Editorial Committee Members for their assistance, advice and suggestion in shaping up the Journal. My sincere thanks to our distinguished reviewers and all team members of Tecnia family for their untiring efforts and support in bringing out this bi-annual Journal.

I am sure the issue will generate immense interest among corporate members, policy-makers, academicians and students.

*Editor*

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# BOTNET DETECTION BY MONITORING DNS TRAFFIC

Sandip Ravindra Sonawane\*

**Abstract:** Recent malicious attempts are intended to get financial benefits through a large number of compromised hosts, which are called software robots or simply bots. A group of such a bots, called as a botnet, is remotely controllable by a bot master and can be used for performing malicious activities like sending spam mails, stealing personal information, malware dissemination, phishing, click fraud, launching Distributed DOS attack etc. Among the various forms of malware, botnets are emerging as the most serious threat against cyber-security as they provide a distributed platform for several illegal activities. Basically botnets makes the use of command and control channels through which they can be updated and directed. Recently, botnet detection has been an interesting research topic related to cyber-threat and cyber-crime prevention.

**Keywords:** Bot; Botmasters; Botnet; Botnet Detection; Cyber-security; Command and Control

## INTRODUCTION

The term "Bot" is derived from the word "Robot"; and similar to robots, bots are designed to perform some predefined functions in automated way. In other words, the individual bots are software programs that run on a host computer allowing the botmaster to control host actions remotely. A large pool of compromised hosts, called bots, communicate with a bot controller to coordinate the network of bots. Such a network is commonly referred to as a botnet. An attacker, called a botmaster, controls a botnet to perform various malicious activities. Malicious botnet is a network of compromised computers called "Bots" under the remote control of a human operator called "Botmaster". One prominent characteristic of botnet is the use of command and control (C&C) channels. The main purpose of the channels is to deliver the commands of a botmaster. And today's botnet use the Internet Relay Chat (IRC) protocol, which is mainly designed for group communication in discussion forum called Channels. But the channels are now used for the communication of a botnet among distributed bots and their controller Botnets pose a significant and growing threat against cyber-security as they provide a distributed platform for many cyber-crimes such as

Sending spam mails, theft of personal data, Distributed Denial of Service (DDoS) attacks against critical targets, malware dissemination, phishing, and click fraud. Botnet detection has been a major research topic in recent years. Researchers have proposed several approaches for botnet detection to combat botnet threat against cyber-security. In this survey, botnet phenomenon will be clarified and advances in botnet detection techniques will be discussed.

Two ways of detecting botnet are, first setting up Honey pots and Second Monitoring Traffic. This work mainly focuses on second way of detecting botnet traffic i.e. using Traffic Monitoring. The remainder of the paper is organized as follows: Section II describes botnet phenomenon covering a botnet life-cycle, its features and activities for better understanding of botnet mechanism. Section III discusses proposed work. Section IV describes proposed botnet detection mechanism and with the Section V paper ends with concluding remarks.

## BOTNET PHENOMENON

Botnets are emerging as the most significant threat facing online ecosystems and computing assets. Malicious botnets are distributed computing platforms

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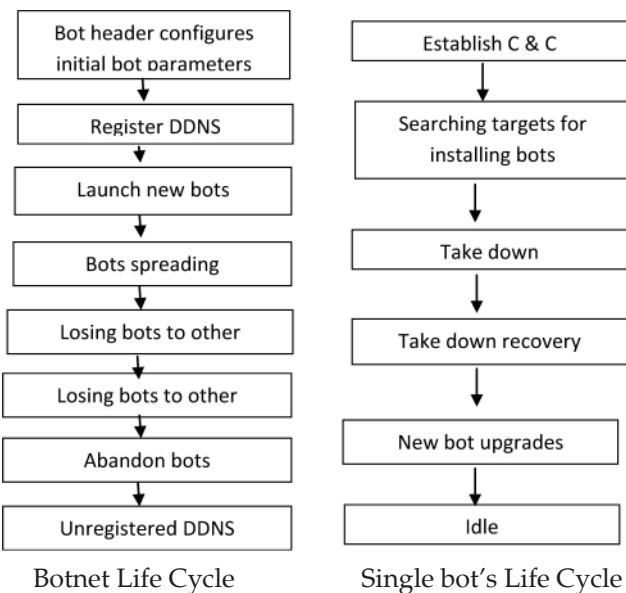
\*Prof. Sandip Ravindra Sonawane, Assistant professor, R. C. Patel institute of Technology, Shirpur

predominantly used for illegal activities such as launching Distributed Denial of Service (DDoS) attacks, sending spam, trojan and phishing emails, illegally distributing pirated media and software, force distribution, stealing information and computing resource, e-bussiness extortion, performing click fraud, and identity theft .

The high light value of botnets is the ability to provide anonymity through the use of a multi-tier command and control (C&C) architecture. Moreover, the individual bots are not physically owned by the botmaster, and may be located in several locations spanning the globe. Differences in time zones, languages, and laws make it difficult to track malicious botnet activities across international boundaries. This characteristic makes botnet an attractive tool for cyber-criminals, and in fact poses a great threat against cyber-security. In order to provide better understanding of botnet phenomenon, botnet characteristics and botnet life-cycle will be explained respectively.

**Botnet Life-cycle**

Botnet are often run by malicious programmers with specialized skills while advance attackers operate the control channel. These people use the Botnet for commercial uses and ‘sell’ the services. They also install special software’s to steal information. Some attackers are highly skilled and belong to well organized crime structures. Armed with power of thousand Bots, it is viable for them to take down almost any website or network instantly. In other words Botnet are power



**Fig.:1** Life Cycle of Botnet and a Single Bot

weapons. The figure 1 illustrates the various stages in a typical life cycle of a Botnet and a single bot.

**B. Botnet Features**

Following 5 cases show the situations of the DNS query used in botnet.

- (1) At the rallying procedure: If the host infection success, the infected hosts should be gathered and as referred in previous section 3.B, DNS is used.
- (2) At the malicious behaviors of a botnet: Several types of malicious activities such as DDoS attack and spam mailing are accompanied with the DNS transmit.
- (3) At C&C server link failures: If the network or link of C&C server fails, bots cannot access to the C&C server, after a while, they begin to send the DNS query to DNS server.
- (4) At C&C server migration: the botnet migrate one to another candidate C&C server. In that moment, DNS query also used.
- (5) At C&C server IP address changes: If a C&C server uses dynamic allocated IP, the corresponding IP address can be changed at any time and a botmaster also can change the IP address of the C&C server intentionally. If the IP address of the C&C server changed, the bots cannot connect the old IP address of the server, so they send the DNS query to access new C&C server.

DNS queries of botnet can be distinguishable from legitimate DNS queries; First, only botnet members send queries to the domain name of C&C server (fixed size), legitimate user never queries to the C&C server domain name. Therefore, the number of different IP address which queried botnet domain is normally fixed. On the other hand, the legitimate cites are queried from anonymous users (random) at usually. Second, the fixed members of botnet act and migrate together at the same time. The group activity of botnet derived from this property. DNS queries from botnet occur temporary and simultaneously. However, most of legitimate DNS queries occur continuously and do not occur simultaneously. Third, the botnet uses DDNS for C&C server usually, but legitimate cites do not commonly use DDNS.

**C. Botnet Activities**

- Distributed Denial of Service (DDoS) attacks
- Spamming
- System exploitation
- Hosting services
- Internet click fraud
- Attacking IRC Network
- Manipulating Online Polls or Games
- Spreading New Malware & Spy ware
- Mass Identity Theft
- Sniffing Traffic



## PROPOSED WORK

There are many techniques for detection of Botnets. However; there are two essential techniques for botnet detection: setting up honeypot and passive network traffic monitoring [36]. Many papers discussed about using honeypot for Botnet detection [1, 2 and 35]. But we have to take into consideration that honeypot cannot detect bot infection most of the times and is just good for understanding Botnet characteristics. For identifying the existence of Botnets in the network, passive network traffic monitoring is helpful.

There have been a few researches on the methodological analysis about the bot and botnet such as their behaviors, statistics, and traffic measurements. Jones [3] provided botnet background and recommendations so that network and system security administrators can recognize and defend against botnet activity. Cooke et al. [4] outlined the origins and structure of bots and botnets, data from the operator community and study the effectiveness of detecting botnets by directly monitoring IRC communication or other command and control activity and show a more comprehensive approach is required.

Barford et al. presented a perspective based on an in-depth analysis of bot software source code and reveals the complexity of botnet software, discusses implications for defense strategies based on the analysis [5]. Rajab et al. [2] constructed a multifaceted infrastructure to capture and concurrently track multiple botnets in the wild, and achieved a comprehensive analysis of measurements reflecting several important structural and behavioral aspects of botnets. They studied the botnet behavior, botnet prevalence on the Internet, and modeling the botnet life cycle.

Recently, a few attempts have been made to cope with botnet problems and most of them have come to focus on detection of botnet. Bots are sending DNS queries in order to access the C&C channel server. If we could know the name of domain name of C&C channel server then we can blacklisting the domain name for sinkhole techniques to capture the botnet traffic and measure the botnet. Dagon et al. [6] identified key metrics for measuring the utility of a botnet, and various topological structures botnet may use to coordinate attacks. And using the performance metrics, they consider the ability of different response techniques to degrade or disrupt botnets. Their study used DNS redirection to misdirect botnets. However our approach does not need any DNS redirection and communication with any component of botnet. Dagon also present botnet Detection and response approach

[7] with analyzing peculiarity of botnet rallying DNS traffic (particularly, measuring canonical DNS request rate and DNS density comparison). However the detection technique could easily be evaded when botmasters know the mechanism and poisoned y using faked DNS queries. Kristoff [8] also suggested a similar approach, but the mechanism has the same weakness.

Binkley [9] proposed an anomaly-based algorithm for detecting IRC-based botnet meshes. The algorithm combines an IRC mesh detection component with a TCP

Scan detection heuristic called the TCP work weight. They can detect IRC channel with high work weight host but some of them could not be a member of botnet (false positive), additional analysis or many borderline cases.

Ramachandran [10] developed techniques and heuristics for detecting DNSBL reconnaissance activity, whereby botmasters perform lookups against the DNSBL to determine whether their spamming bots have been blacklisted. This approach of botnet detection is derived from novel idea that detects DNSBL reconnaissance activity of botmaster but also have false positives and some defects that is referred in their paper.

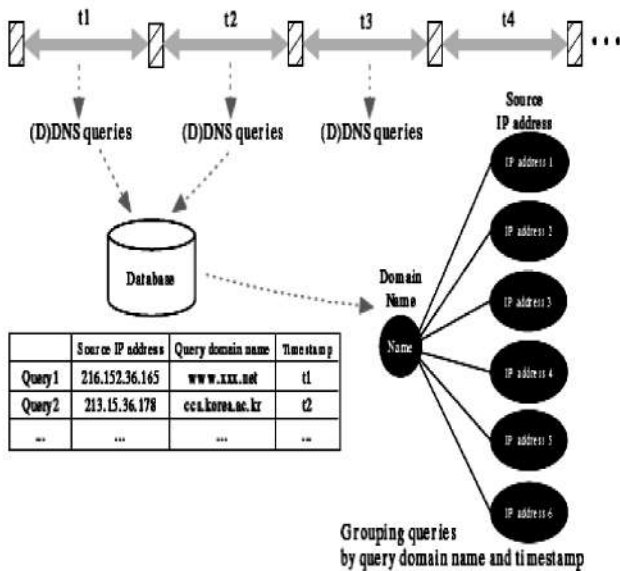
Gu [11] modeled the boot's penetration process into a series of flows known as the 'Bot Infection Dialog Model' when proposing a solution for the detection of the network-based botnet. BotHunter detects bots by analyzing the correlation of alarms collected by the different elements of the network intrusion detection system located in the network border. It detects a bot by modeling the process by which the bot infects the system. It can detect the bot in five steps: scan penetrated from outside (E1); external infection (E2); binary download of code connected from inside to outside (E3); C&C communication connection from inside to outside (E4), and photo scan attempted to outside (E5).

BotHunter.[12] It analyzes data by mutually clustering the behavior traffic (A-Plane) that detects the behavior of the communication traffic (C-Plane), which detects the communication between the hosts and host. The C-Plane flow contains all flow data between a certain internal IP and destination IP in a given time period. It also includes all port data using the same transfer layer protocol Choi [13] suggests a botnet detection method based on its unique group behavior. It published the botnet detection algorithm to separate normal DNS queries from botnet DNS queries, and presented the result by recognizing that the DNS query generated by a botnet differs from a normal DNS query due to

bot's basic characteristics of group behavior. There are also studies in which the detection of a botnet was achieved with the visualization of a DNS query pattern. However, the detection technique can still be bypassed when the bot master uses false DNS queries by employing a spoof IP. In any case, these methods are limited as they are only effective against centralized DNS botnet. The most recent botnet detection techniques based on data mining as well as DNS-based botnet detection approach in provide promising tradeoff. These methods are independent of botnet protocol and structure. Moreover, they are effective to detect encrypted C&C botnet communication. In overall, these techniques can detect real world botnet regardless of botnet protocol and structure with a very low false positive rate.

### PROPOSED BOTNET DETECTION FRAMEWORK

The proposed work involves botnet DNS query detection algorithm by using the different features of botnet DNS and legitimate DNS which mentioned above. The algorithm has 3 different parts which are (1) Insert-DNS-Query, (2) Delete- DNS-Query, (3) Detect-BotDNS-Query.



**Fig.2:** Insert-DNS-Query stage of algorithm  
 First, there is an array A prepared for storing the DNS queries. We inserted the domain name and source IP address of queries to A. If a new query comes in, checking it already existed in A. If it is a new domain name, insert data. Otherwise, check the IP address

already exist in the IP list of the domain name and insert the IP address if it is not exist in the IP list. In this step, the data (domain name, source IP addresses and timestamps) of DNS queries are arranged by the requested domain name. Second, execute the Delete-DNSQuery step for removing redundant DNS query. If the size of IP list do not exceed the size threshold or the domain name is legitimate which already exist in a whitelist, the domain name of queries do not have to be processed. Therefore, it should be removed from array A for reducing the processing overhead and saving the memory.

Finally, we find the botnet DNS queries in Detect-BotDNS-Query step. We define and compute numerical value of group activity of botnet DNS, called similarity. If there are two IP lists which are requested at time t1 and t2 and have a same domain name query, assume that each size of IP lists as A and B. And if there were same IP addresses between two IP lists, assume the size of duplicated IP addresses as C. We let S denote the similarity such that

$$S = \frac{1}{2} \cdot (\frac{C}{A} + \frac{C}{B})(A \neq 0, B \neq 0).$$

If A = 0 or B = 0 then we define the similarity as -1. If the similarity approximated 0, white listing the domain name and delete the IP list of the domain. Assume that there is domain name DN which requested by multiple sources IP addresses in a certain time t, we measure how many source IP addresses of them request DN after t in each time slot. Due to the features of botnet DNS which mentioned above. The similarity of botnet DNS close to 1 different from legitimate DNS. and the suspicious domain name that occurred just one time and could be occurred later, which have the value of similarity -1, insert the domain name to blacklist to be monitored after that time.

So finally here in this botnet detection mechanism, we used the concept of hash table. We assume the situation that our system monitor huge scale of network then the processing time can be a big problem using link list concept. Hash tables are a great solution for dealing the IP address lookup table. So by using hash table concept we tried to reduce the processing time for huge traffic.

### CONCLUSION

Botnets pose a significant and growing threat against cyber-security as they provide a key platform for many cyber crimes such as Distributed Denial of Service (DDoS) attacks against critical targets, malware dissemination, phishing, and click fraud. Despite the long presence of malicious botnets, In comparison to other kind of malware Botnets are harder to monitor and shutdown and detection of them become a

challenging problem. Only few formal studies have examined the botnet problem and botnet research is still in its infancy.

As mentioned in this paper, the high light value of botnets is the ability to provide anonymity through the use of a multitier command and control (C&C) architecture. Diversity of botnets protocols and structures makes botnet detection a very challenging task.

Our detection technique is based on hash table concept it is possible to monitor & handle huge scale of network traffic and also reduces the processing time which is the significant problem arises when using link list based detection algorithm.

## REFERENCES

- M.A Rajab, J. Zarfoss, F. Monrose, and A Terzis, "A multifaceted approach to understanding the Botnet phenomenon," 6<sup>th</sup> ACM SIGCOMM on Internet Measurement Conference, IMC 2006, 2006, pp. 41-52.
- E. Cooke, F. Jahanian, and D. McPherson, "The zombie roundup Understanding, detecting, and disrupting Botnets," Proc. of Workshop on Steps to Reducing Unwanted Traffic on the Internet (SRUTI'OS), June 2005
- J. Jones, "Botnets: Detection and mitigation," Feb 2003. FEDCIRC.
- P. Barford and V. Yegneswaran, "An inside look at botnets," 2006. Special Workshop on Malware Detection Advances in Information Security, Springer Verlag.
- D. Dagon, C. Zou, and W. Lee, "Modeling botnet propagation using time zones," in NDSS 2006, Feb 2006.
- D. Dagon, "Botnet detection and response," in OARC Workshop, 2005
- J. Kristoff, "Botnets," Oct 2004. 32<sup>nd</sup> Meeting of the North American Network Operators Group.
- J. R. Binkley and S. Singh, "An algorithm for anomaly-based botnet detection," in the 2<sup>nd</sup> Workshop on Steps to Reducing Unwanted Traffic on the Internet (SRUTI 06), 2006.
- N. F. A. Ramachandran and D. Dagon, "Revealing botnet membership using dnsbl counter-intelligence," in The 2<sup>nd</sup> Workshop on Steps to Reducing Unwanted Traffic on the Internet (SRUTI '06), 2006.
- Guofei Gu, Junjie Zhang, and Wenke Lee, "BotMiner: Clustering Analysis of Network Traffic for Protocol - and Structure - Independent Botnet Detection" USENIX Security Symposium, Aug. 2008.
- Cyber-TA. BotHunter Free Internet Distribution Page, <http://www.cyber-ta.org/BotHunter>, 2008.
- Hyunsang Choi, Hanwoo Lee, Heejo Lee, and Hyogon Kim, "Botnet Detection by Monitoring Group Activities in DNS Traffic", IEEE Int'l Conf., Computer and Information Technology (CIT), Oct. 17, 2007.
- B. Saha and A. Gairola, "Botnet: An overview," CERT-In White Paper CIWP-, 2005. pp.05
- M. Rajab, J. Zarfoss, F. Monrose, and A. Terzis, "A multifaceted approach to understanding the botnet phenomenon," in Proc. 6<sup>th</sup> ACM SIGCOMM Conference on Internet Measurement (IMC'06), 2006, pp.41-52
- N. Ianelli, A. Hackworth, "Botnets as a vehicle for online crime," CERT Request for Comments (RFC) 1700, December 2005. PP 7-7
- Honeynet Project and Research Alliance. Know your enemy: Tracking Botnets, March 2005. PP 7-7
- G. Schaffer, "Worms and Viruses and Botnets, Oh My! : Rational Responses to Emerging Internet Threats", IEEE Security & Privacy 2006. PP 52-5.
- E. Cooke, F. Jahanian, and D. McPherson, "The zombie roundup: Understanding, detecting, and disrupting botnets," in Proc. Steps to Reducing Unwanted Traffic on the Internet Workshop (SRUTI'05), 2005, pp. 39-44.
- A. Ramachandran and N. Feamster, "Understanding the network- level behavior of spammers," in Proc. ACM SIGCOMM, 2006. PP 291-30.
- Z. Zhu, G. Lu, Y. Chen, Z. J. Fu, P. Roberts, K. Han, "Botnet Research Survey," in Proc. 32<sup>nd</sup> Annual IEEE International Conference on Computer Software and Applications (COMPSAC '08), 2008, pp.967-972.
- J. B. Grizzard, V. Sharma, C. Nunnery, B. B. Kang, and D. Dagon, "Peer-to-peer botnets: Overview and case study," in Proc. 1<sup>st</sup> Workshop on Hot Topics in understanding Botnets, 2007. PP 1 - 1
- P. Wang, S. Sparks, and C. C. Zou, "An advanced hybrid peer-to-peer botnet," in Proc. 1<sup>st</sup> Workshop on Hot Topics in understanding Botnets, 2007. pp 2-2.
- C. Kalt, "Internet Relay Chat: Client Protocol," Request for Comments (RFC) 2812 (Informational), April 2000.
- A. Karasaridis, B. Rexroad, and D. Hoeflin, "Wide-scale botnet detection and characterization," in Proc. 1<sup>st</sup> Workshop on Hot Topics in Understanding Botnets, 2007. pp 7-7.
- K. K. R. Choo, "Zombies and Botnets," Trends and issues in crime and criminal justice, no. 333,

- Australian Institute of Criminology, Canberra, March 2007, pp 321- 340.
- D. Dagon, G. Gu , C.P. Lee, W. Lee, "A Taxonomy of Botnet Structures," in Proc. 23<sup>rd</sup> Annual Computer Security Applications Conference (ACSAC 2007), 2007, pp. 325-339.
  - H. Choi, H. Lee, H. Lee, and H. Kim, "Botnet Detection by Monitoring Group Activities in DNS Traffic," in Proc. 7<sup>th</sup> IEEE International Conference on Computer and Information Technology (CIT 2007), 2007 pp.715-720.
  - P. Vixie, S. Thomson, Y. Richter, and J. Bound, "Dynamic updates in the domain name System (dns update)," 1997 <http://www.faqs.org/rfcs/rfc2136.html/>.
  - R.Villamarin-Salomon and J.C. Brustoloni, "Identifying Botnets Using Anomaly Detection Techniques Applied to DNS Traffic," in Proc. 5<sup>th</sup> IEEE Consumer Communications and Networking Conference (CCNC 2008), 2008, pp. 476-481.
  - N. Provos, "A virtual honeypot framework," in Proc. 13<sup>th</sup> USENIX Security Symposium, 2004, pp. 1-14.
  - M. Vrable, J. Ma, J. Chen, D. Moore, E.Vandekieft, A. C. Snoeren, G.M. Voelker, and S.Savage," Scalability, Fidelity and Containment in the Potemkin Virtual Honeyfarm," in Proc. ACM SIGOPS Operating System Review, vol. 39(5), pp. 148-162, 2005.
  - F. Freiling, T. Holz, and G. Wicherski, "Botnet tracking: Exploring a root-cause methodology to prevent distributed denial-of-service attacks," in Proc. 10<sup>th</sup> European Symposium on Research in Computer Security (ESORICS), vol. Lecture Notes in Computer Science 3676, September 2005, pp. 319-335.
  - P. Barford and V. Yegneswaran, "An Inside Look at Botnets," ser. Advances in Information Security, Springer, 2006.
  - D. Dagon, C. Zou, and W. Lee, "Modeling botnet propagation using time zones," in Proc. 13<sup>th</sup> Network and Distributed System Security Symposium (NDSS'06), 2006.
  - J. Oberheide, M. Karir, and Z.M. Mao, "Characterizing Dark DNS Behavior," in Proc. 4<sup>th</sup> International Conference on Detection of Intrusions and Malware, and Vulnerability Assessment, 2007.
  - Snort IDS web page. <http://www.snort.org>, March 2006.
  - J.R. Binkley and S.Singh, "An algorithm for anomaly-based botnet detection," in Proc. USENIX Steps to Reducing Unwanted Traffic on the Internet Workshop (SRUTI'06), 2006, pp 43-48.
  - G. Gu, J. Zhang, and W. Lee, "Botsniffer: Detecting botnet command and control channels in network traffic," in Proc. 15<sup>th</sup> Annual Network and distributed System Security Symposium (NDSS'08), 2008.
  - D. Dagon, "Botnet Detection and Response, The Network is the Infection," in OARC Workshop, 2005.
  - J. Kristoff, "Botnets," in 32<sup>nd</sup> Meeting of the North American Network Operators Group, 2004.
  - A. Schonewille and D.J. van Helmond. "The Domain Name Service as an IDS," Master's Project, University of Amsterdam, Netherlands, Feb2006, <http://staff.science.uva.nl/~delaat/snb-2005-2006/p12/report.pdf>
  - N. F. A. Ramachandran and D. Dagon, "Revealing botnet membership using dnsbl counter-intelligence," in Proc. 2<sup>nd</sup> Workshop on Steps to Reducing Unwanted Traffic on the Internet (SRUTI '06), 2006, pp 8 - 8
  - J. Goebel and T. Holz, "Rishi: Identify bot contaminated hosts by irc nickname evaluation," in Proc. 1st Workshop on Hot Topics in Understanding Botnets, 2007, pp 8-8
  - W. Strayer, D. Lapsley, B. Walsh, and C. Livadas, Botnet Detection Based on Network Behavior, ser. Advances in Information Security. Springer, 2008, PP. 1-24.
  - M. M. Masud, T. Al-khateeb, L. Khan, B. Thuraisingham, K. W.Hamlen, " Flow-based identification of botnet traffic by mining multiple log file," in Proc. International Conference on Distributed Frame works & Applications (DFMA), Penang, Malaysia, 2008, pp 200-206.
  - G. Gu, R. Perdisci, J. Zhang, and W. Lee, "Botminer: Clustering analysis of network traffic for protocol- and structure independent botnet detection," in Proc. 17<sup>th</sup> USENIX Security Symposium, 2008, pp 139-154.
  - Honeynet project, Know your Enemy:tracking Botnets, march 2005.<http://www.honeynet.org/papers/bots>.
  - Z. Zhu, G. Lu, Y. Chen, Z. J. Fu, P.Roberts, K. Han, "Botnet Research survey". in Proc. 32<sup>nd</sup> Annual IEEE International Conferences on computer software applications (COMPSAC) 2008, page 967-972.

# RETAIL METRICS AND THEIR GROWING ROLE IN INDIAN BUSINESS CONTEXT

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**Abstract:** Retail has been one of the most competitive business vertical with a clear intent on sales maximization by retaining their customers. For them to maintain their leadership positions, they require knowing details of their business on various frequency levels or periods. This makes way for hundreds of key performance indicators (KPIs) which a retailer requires to keep abreast gaining distinct competitive advantage by facilitating deliverance of superior business performance. Metrics (measures) are performance measurements that are not only important in the retail scenario but across the business and industries, irrespective of the geographical spread, quantum of business, the need to analyze business performance remains and thus metrics become important. These metrics prove crucial for data-driven decision making which are supported by hard facts rather than mere gut reactions. Metrics bear the responsibility of quantifying the qualitative data besides being an important MIS tool to ensure the growth, direction and profitability of the organization by data-driven decision making. Thus metrics are usually numeric values and they can be as simple as mathematical sum of the values in a column to a multifarious computation involving complex, mathematical calculation. Retail Metrics help retail businesses to compare, analyze and forecasting by making available relevant data like same store sales estimates to both the buy-side and sell-side investment business partners. A metric may be defined as a statement which specifies how a performance measure is calculated i.e, justifying the relevance and logic along with the periodicity. The core constituent of a metric is the formula that specifies how a predefined calculation is to be done. Needless to mention, this uni-logic calculation criteria can turn to multi-logic decision making parameters. Thus, a metric typically contains other components that specify additional criteria for calculating the metric so as to provide an extensive set of predefined business measures and key performance indicators for business intelligence in a retail environment.

## Introduction

The present customer has been bestowed with easily accessible information. He is equipped with almost endless global alternatives, perceived and demanded value-additions, and facilitative cross-channel shopping experiences. This makes the shopper exhibit

impatience or intolerance for retailers who either are not able to understand the customer requirements in the 'right' context or simply they don't have the desired merchandise available with them. The needs of the customer have gone 'specific' from 'impulsive'. This makes it imperative for the retailers, who are witnessing this reactive period of immense &

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disruptive change in the retail industry, to stand and deliver to the harbingers of change 'the customers'. This change in technology enabled customer, whether it is e-commerce or m-commerce led, the new front door of the store is now located on the mobile devices. With such challenges and upwardly growing trend retailers are fast trying to modify and promulgate their new business models to stay relevant to the customer.

Precisely, that's the point that the retailers cannot just evaluate the business using the traditional business performance metrics. Especially when the need of an emergent omni-channel retail is here which demands the industry to develop and use a new set of evaluative metrics, from managing the business on the front lines and in-store to developing critical strategies from the retail front and boardroom. In context of, offline retail, the seasonality, fashion trends and festivals fundamental business centric business models have done well earlier but the future demands for up-gradations and colloquial revamping. New shopping reasons for the customers include deal & offers, shopping convenience, product and /or service novelty-driven besides impulses. Retail Metrics tracks and analyzes organic retail sales growth, retail earnings performance, and same store sales surprise trends among other key industry metrics. This provides institutional investors with key research inputs into their investment decision making process. Retail Metrics preserve significant chronological incomes and corresponding store sales trends.

Now, another question which confronts a retailer is on balancing the online and offline sales and the differences are strikingly bigger. The same customer who spends an hour or so in an offline format may hardly spend five odd minutes on the online facility of the same. Still, retail sales and sales growth have stayed to remain key metrics but retail sales may make way for the omni-channel metrics as the same customer may opt for different retail route offerings.

### **Retail Benchmarking:**

A benchmark is the value that retailers measure their performance against. Without a benchmark, metrics will be a sliding scale. The two benchmarks retailers should consider include:

1. *Past performance:* Yearly, quarterly, daily, and hourly- the more precise the unit of analysis, the more precise the measurement.
2. *Industry averages:* Retail sector benchmarks, available through suppliers and industry organizations, give retailers another way of determining how well they're doing.

This surge in obtaining the scientific analytical data

may appear making the business metrics overvalued, as the retailers tend to become overwhelmed with data and metrics. Of such a wide array of data availability of their store, it becomes difficult understanding which metrics should get focus on. Another flanking huge problem is the cost and expense minimization. Retailers are always challenged of how do they grow the store top line, but simultaneously check and prune the expenses. Certain retailers interacted, happily opine that they witness an increase in computer and IT expenses which bring down their Labor costs. This line of thinking requires alteration as the decision making criteria, metric, should be impact on customer conversion. It was observed that majority of standalone retailers didn't measured conversion because they believed that they shouldn't be measuring traffic flows. Such retailers prioritize transactional data and transactional metrics, competitor sales, average ticket, sales per square foot etc. these metrics have been useful traditionally but it's the time to 'build on' to find what drove the financial outcomes. So, for example, sales might have increased, but customer footfall could be down so indicating towards more customer sales per head. Higher store sales disconcert with fewer customer entry indicating a surge in the product demand. This could be a resultant of higher marketing spends, CRM activity or even a holiday. So the retailer has to have a track of Traffic and customer conversion rate first leading to average sale and average ticket. Customer service and customer experience scores are another whole set of data assessment parameters that retailers are deploying.

### **Generation of Data for Analytics:**

Retailers do care about the large amount of data inputs being generated from the day to day retail operations and further utilizing this data for developing metrics. Such raw data inputs from the POS (Point of Sale) system, inventory counts, year-end reviews, customer satisfaction surveys, relevant industry information and large secondary data. Technology and business process flow charts help gain significant insights. This requires time and investment both. Since deep data digging involves process for sorting or filtering through the irrelevant numbers to get to the core which is time consuming. Investment as obtaining the right information requires technology like point of sales systems and CRM data tools etc which not only craft data meaningful but validates it by cross verification.

With the right technology and processes in place retailers can pull more precise and more useful details from the raw data. Retailers who can generate customer preference specific intelligence about

and buying patterns are better able to connect with individual customers, refine the product mix, and hone customer service and business practices to be more efficient, cost-effective, and responsive.

The more refined the data, the more precise the retailer can measure the store's current performance against past performance, market performance, and retail industry benchmarks.

### Assessing the Success:

❖ Leveraging store traffic to increase customer sales

Once an increase in traffic is achieved retailers will want to convert more of the people who enter the store into customers. This is sales conversion, a metric that every retailer should understand and use. To determine the store's conversion rate, divide the total sales by the number of people who enter the store.

Measuring success requires at least three steps.

1. **Set objectives.** In the case of increasing traffic into a store, a retailer may set a goal of a ten per cent increase in traffic during the holiday season compared to the previous year. A ten per cent increase is a real objective, a specific goal that a retailer can quantitatively measure. Set objectives that are shaped by the goals you want to achieve.
2. **Formulate a plan** to accomplish that objective. Here, too, metrics are useful in determining the plan. To drive traffic a retailer will want to know what kind of advertising channels have proved most effective at catching the attention of shoppers. They'll want to know what kind of budget they have to spend, what kind of advertising competitors will spend, and how long to advertise.
3. **Measure the actual traffic numbers during the promotional period against the objectives.** Did traffic increase by ten per cent? Then the retailer can ask deeper questions about what worked. Did the promotion work? What messaging and advertising drove traffic into the store? Did we convert that additional ten per cent into paying customers?

### Shopping Cart Abandonment

A low customer conversion rate is a matter of high concern as it indicate towards operational inefficiencies and we require to understand how many visitors had an inclination to buy but couldn't. Thus the store's cart abandonment metric indicates the percentage of visitors who bought products to their shopping cart but did not complete the billing process. This means the cart abandonment rate has to be lower. Cart abandonment typically indicates an intent to

purchase, but went unrealized; means big to the retail business as it directly correlated to your customer acquisition & marketing costs. Customer has spent a lot of time, energy, efforts involving the salesman services they leave without buying means you lost potential customers. It gets especially bad if you paid a lot of money to get these visitors to your store. Making sure your cart abandonment is low is key to improving your conversion rate.

- **Average Ticket Size:-** Which is also known as Basket size, This refers to the average bill value. It is calculated as Total sales / No of invoices. (Example :- Let the Total Days sale of a Store \$100000 and Total no of bills or invoices made or generated be Qty 80 then the Average Ticket Size of that store for that particular day would be  $\$100000/80 = 1250/-$ ). It is one of the important operational Parameter for stores to increase their sale, a little concentration on this parameter, can boost the average store sale
- **Average Customer Spend:-** This metric rivets calculating the average value a customer is spending, each time he purchases. This can be found through searching for *no. of pcs. per bill* he transacts. This is also known as *average number of units purchased per transaction* (UPT). This value is dependent on the type of retail store say, an electronics retail store would tend to have a higher average spend per transaction and a lower UPT compared to an apparel or grocery store which is likely to have a lower average spend but higher units per transactions. An analysis of average customer spend can help retailers in segmenting their customers and plan their sales and marketing efforts.
- **Stock Turnover Rate**  
Inventory turnover refers to the number of times the average inventory of a product is sold in a year. It is an indicator of how quickly you are able to sell your inventory. If a retailer's inventory turnover ratio goes down from 10 to 6, it indicates that the inventory is not turning over as quickly as it had in the past. This also indicates that the retailer now has excess inventory which requires liquidation. This puts an added pressure on the sales team to sell from the existing stock rather than demanding more merchandise. This can lead to discounting thereby impacting sales margins. Besides, it also pressurizes the inventory team to flush out non salable merchandise from the system. Better informed decisions forces the top management to come up with stock liquidation plans but their biggest concern still lies in building operational efficiencies that such repeated

incidences which not just erode the margins but impact the working capital management and cash flows, can be done away with.

- **Sell Through Rate**

It is calculated as the ratio of the number of units sold in a period and the beginning on-hand inventory for the period. Sell through % tells us how much of inventory we are able to sell in a given period. It can be important especially while planning for seasonal merchandize as you want to sell out all your seasonal merchandize before the season ends. It is to be noted that Sell Through Rate is the opposite of Stock to Sales ratio.

It is important to note that just knowing a KPI is not enough. In order to take decisions or corrective actions, one must look at multiple KPIs in the right context. For example, assume that you're analyzing profit margins by product and realize that Product A is unprofitable, i.e., its cost is more compared to its sale value. This information may lead you to decide to stop selling this product. However, you may instead analyze this in more detail and find that you buy the product from two distributors and one of them is overcharging you for the product. With this new information, you can now either negotiate new rates with the supplier.

This metric endorses employee as a formidable force to impact the operational excellence effort of the retail store. It duly recognizes the staff efforts into quantifiable format for the human resource be given a balanced platform to further construct on.

- *Wage per sale ratio*: this ratio underlines the cost-effectiveness of store overheads. This ratio enables establishing a relationship between the sales and the employee head by dividing annual sales by total employees. The higher this ratio is, the more efficient the retail store would be. Alternatively, this means how good sales

the store is doing with fewer employees. This magnifies the employees as valuable resources having the multifunctional, efficient, disciplined and cost effective qualities. Grooming, training and retaining such employees is a task not be compromised. It's the HR managers' function to keep the morale of such employees boosted by strategically utilizing the motivational tools.

- *Number of complaints*: Never underestimate what complaints can be doing to your store's sales. For every poor interaction in your store, customers need 12 excellent ones to restore their faith. Complaints are also more likely to reach additional potential customers than any other type of feedback. Keep your complaints low by having a well-trained staff that understands how important customer loyalty is.
- *Number of units per transaction*: This metric is good to watch for two reasons. First, it can tell you how effective your salespeople are at getting people to pick up a second item. Use this metric to track upsell success for sales associates. Second, this key performance indicator lets store managers know if they're overdoing in-store promotions. If your units per transaction are rising but your sales total is not, customers are likely stocking up on sale items without contributing to your bottom-line.

### Operational Excellence

- *Conversion percentage*: The first step in finding out the store's conversion percentage is tracking the number of footfalls (customer visits) to the store. To understand how effective your displays, promotions, and selections are, you'll also want to know your conversion percentage (number of purchases / number of footfalls). If your percentage is low, gather customer feedback to find out where expectations weren't met and make changes to correct them. Higher conversion optimization means more sales with

S.No	Operation Parameter	Data source	Example	WoW Gr%	YoY Gr%
1.	Customer Entry	From Records	3733		
2.	No.of Bills	From Records	663		
3.	Conversion	1/2 X 100	18%		
4.	Bill Value	8/2	1888		
5.	ASP	8/7	569		
6.	Pcs/Bill	7/2	3.32		
7.	Sold Qty	From Records	2201		
8.	Total Sale Value	From Records	12.52		

Employee Productivity- the emerging metric paradigm:



less advertising and promotion, lowering your operational costs.

- *Same-store sales:* Calculating your store's percentage increase in sales over its previous year's performance (same-store sales percent) is one of the most-tracked metrics in retail. Evaluating this number allows you to see what new revenue sources might be affecting your sales or whether your store has seen increased productivity in sales personnel or management.
- *Sales by category:* If you're not already tracking your best-selling items, there's no time like the present to start. Use this metric to track which categories do well. Ensure your top-selling items are always well-stocked, and you might consider adding to the category with companion items or upgraded options. Conversely, you can remove poor-performing categories to free up floor space for faster-moving inventory.

If retailers make a point to measure training and labor in a ROI model, instead of purely looking at it as an expense, they have at least put themselves in position to accurately track the fruits of their training efforts. "Sales per labor hour invested", or "sales per labor dollars invested" are two measurements that can begin the process of considering store associates as "assets", rather than expense items. Further, most HR departments can measure, at least directionally, the cost of employee turnover. Without this number in the equation, retailers are just fooling themselves when they believe that cuts to benefits, hours, and full time status save expense without have any consequence on both the top and bottom line.

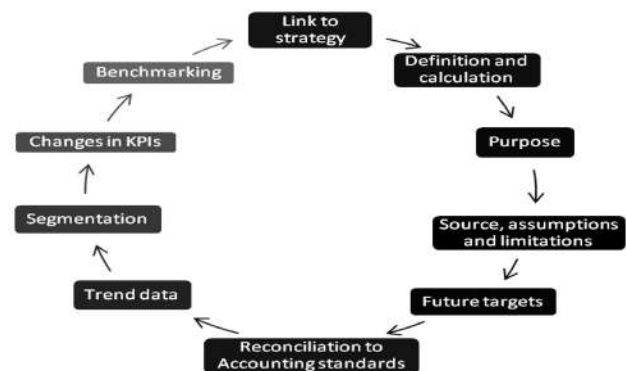
### Retail Metrics:

They are quantifiable measures which are deployed for measuring the success or progress rate on budgetary on the time fronts. An active source is required for creation of a metric which is examined for tracking the advancement toward a desired business objective. For this, the active data sources can be of qualitative nature and could be in form of ratio, like getting customer reviews whether they like or dislike a product offering. Broadly they can be categorized on following aspects:

1. Capital expenditure
2. Store portfolio changes
3. Expected return on new stores
4. Customer satisfaction
5. Same store/like-for-like sales
6. Sales per square foot/meter

### Retail Metrics and KPI aim at creating 'Value':

The value proposal is designed objectively on overall retail strategy and resource allocation resulting in service quality definitions, design and process innovation and choice of preferred brands of the customers stands all-time relevant. Monitoring and reinforcement, adherence of parameters, operational control and effectiveness should be reinforced. The objective of the value strategy has to retain the overall focus on attracting, retaining customers and staying relevant to the customers by providing them with desired product offerings and quality service. Any retail business organization strives to achieve its objectives through organic growth and in process the focal process of delivering value prevails in order to achieve continually better results not only over the competitors but continually set and surpass our own benchmarks. This also enables to remain focused over the long term strategies and remain future relevant and ready.



### Conclusion

The paper aims to put forward diverse approaches opted by the international organized retail business community in pursuit of finding the right mix of key performance indicators on different parameters. The focus is to sustain the business in the longer run, bring in efficiencies by identifying the loopholes, compliance besides providing a common platform of evaluation for all geographically divided stores. Since KPIs illustrate a company's objectives from the top to the lowest level it is suggested to be expressed in traceable operational indicators at department/function/employee levels. More and more companies realize the importance of metrics monitoring on short term, medium or long-term objectives. Whilst analysts highlight inconsistencies in calculation methods of KPIs they did not feel that a standard calculation

should be prescribed. Further they did not feel that assurance over the calculation would be valuable as they perceived that this would remove the flexibility of companies to select the most appropriate measures. The paper tries to provide an interface between theory and practice adding to the body of knowledge on disclosure theory and in particular KPI disclosure and how it is used. This will in turn help the standard setters in ensuring that disclosures enhance usefulness.

### References:

- Smith, Heijden, (2017) "Analysts' evaluation of KPI usefulness, standardisation and assurance", *Journal of Applied Accounting Research*, Vol. 18 Iss: 1, pp.63 – 86
- Danhof, Wortmann, (2016), *Just-in-Time Retail Distribution: A Systems Perspective on Cross-Docking*. *Journal of Business Logistics*, Vol. 37 iss.3, pp.213-230
- Martino et al. (2017) *Proposal of a Multi-method Decision Support System for the Fashion Retail Industry*. *Business Models and ICT Technologies for the Fashion Supply Chain*, Vol 413 Pp.187-199
- Muntean, Ion (2016) *E-Commerce Performance. Shopping Cart Key Performance Indicators*, *Informatica Economică* vol. 20, no. 1, pp 62-75
- Anthony, Govindarajan, (2007), *Management Control Systems*, 12<sup>th</sup> Edition, McGraw Hill, Singapore.
- Iveta, Gabcanova. (2009), "Human Resources Key Performance Indicator", *Journal of Competitiveness*, Vol. 4 (1): 117-128.
- Kim, W. Chan and Mauborgne, Renee. (2010), *Blue Ocean Strategy: How to Create Uncontested Market Space and Make the Competition Irrelevant*, Harvard Business School Press.
- Thompson et al (2012), *Crafting and Executing Strategy Concept and Cases*, McGraw Hill, New York.
- Singh et al (2015) *Frontline store manager's entrepreneurial orientation for merchandising and service role performance: scale development and validation*, *Marketing Challenges in a Turbulent Business Environment* pp 93-98
- Youn et al (2016). *Measuring Retailers' Sustainable Development*. *Business Strategy and the Environment*. Volume 26, Issue 3, March 2017 pp 385–398
- <http://www.retailcouncil.org/sites/default/files/retailerguides/measuring-for-success.pdf>

# RELATIONSHIP BETWEEN INDIAN AND CHINESE STOCK MARKETS: AN EMPIRICAL ANALYSIS

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**Abstract:** Financial markets across the globe are transforming at a fast pace. Globalization has proved as the biggest reform till date which affects all the economies across globe. Markets have become more integrated in this globalize era and effects of one financial market operations and fundamentals on other have increased. The increased availability of GDRs and ADRs makes it easier for investors to trade international stocks in their own currency and through their normal settlement and clearance institutional. Now, a large number of countries such as Singapore have also introduced "Singapore depository receipt" and India has also brought its "Indian depository receipts" in the year 2008. It is very difficult to access the interdependence of stock markets. Several authors and scholars studied the impact of one stock market on another. Several investment bankers and speculators daily predict the stock market movements of one economy on the basis of stock market movements of another economy. This paper is an attempt to find out the potential for diversification in China and Indian Stock Market by studying correlations in the index returns. The secondary objective of the research is to measure and analyze compounded growth of Indian and China Stock Market.

**Keywords:** -Financial Markets, Globalization, Currency, Speculators, Investment Bankers, Diversification, Interdependence, Volatility.

## INTRODUCTION

Every action leads to reaction. In a globalize era action of one economy has an impact on the financial market of other economy. The markets for goods and services have become increasingly internationalized through the various trade production measures initiated by most countries, migration of labour and the Trans location of production and distribution operations in the other countries. Similarly, the markets for common stocks have become increasingly internationalized. Institutional and individual investors have started resorting to diversification of their investments in stocks of other countries to enhance returns. The increased availability of GDRs and ADRs has made it easier for investors to trade international stocks in their own time and in their

own currency and through their normal settlement and clearance institutions. International stocks are usually segmented into stocks of developed and emerging countries. Among the developed countries, the United States, Japan and the United Kingdom have the largest market capitalizations. Among the emerging economies, Taiwan, China and Brazil have the largest market capitalization. The prices of stocks on markets around the world do not move together synchronously because the economic systems in which those markets are located have dissimilar environments in terms of taxation, Industrial growth, Political stability, Monetary Policy and other factors. Low levels of co-movement of stock prices offer investors the benefit of diversifying their holdings across the markets of countries. That is, investors who

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allocate some of their portfolio to share from other countries can increase the portfolio's expected return with no increase in risk. This benefit of international diversification has led many investors to allocate some of their wealth to foreign markets and shares of foreign firms.

## STOCK MARKET REFORMS IN INDIA

With the objectives of improving market efficiency, increasing transparency, preventing unfair practices and bringing the Indian capital market up to international standards, SEBI was established by enacting SEBI Act, 1992. It created regulator responsibilities for: (a) protecting the interest of investors in securities, (b) promoting the development of the securities market, and (c) regulating the securities market. Its regulatory jurisdiction extends over corporate in the assurance of capital and transfer of securities, in addition to all intermediaries are registered and regulated by SEBI. They also required appointing compliance officer who is responsible for monitoring compliance with securities laws and for redressal of investor grievances.

### Electronic Trading (1994)

The open outcry trading on stock exchanges in India was time consuming and inefficient. This imposed limits on trading volumes and efficiency. 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. This imposed limits on trading volumes and efficiency. In order to provide efficiency, liquidity and transparency, NSE introduced a nation-wide on-line 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. SBTS electronically matches orders on a strict price/time priority and hence cuts down on time, cost and risk of error, as well as on fraud resulting in improved operational efficiency. In order to provide efficiency, liquidity and transparency, NSE introduced a nationwide on line fully automated Screen Based Trading System (SBTS) where a member can punch into the computer the quantities of securities and the prices at which he like to transact and the transaction is executed as soon as it finds a matching sale or buy order from a counter party. SBTS electronically matches order on a strict price/time priority and hence cuts down on time, caused and risk of error, as well as on fraud resulting in improved operational

efficiency. It allows faster incorporation of price sensitive information into prevailing prices, thus increasing the informational efficiency of the markets. It enables market participants to see the full market on real time, making the market transparent. In the very first year of operation, NSE became the leading stock exchange in the country, impacting the fortune of other exchanges and forcing them to adopt SBTS also. As result, all exchanges in India switched from floor trading to anonymous electronic trading.

### Reduction in trading cycle

Under the carry forward system, the trades were accumulated over the trading cycle and at the end of the cycle, this are clubbed together, and positions were netted out and payment of cash and delivery of securities settled the balance. Initially, the trading cycle varied from 14 days for specified securities to 30 days for others and settlement took another fortnight. The exchanges, however, continued to have different weekly trading cycles, which enabled shifting of positions from one exchange to another. Rolling settlement on T+5 basis was introduced in respect of specified scrips reducing the trading cycle to one day. It was made mandatory for all exchanges to follow a uniform weekly trading cycle in respect of scrips not under rolling settlement. All scrips moved to rolling settlement from December 2001. The settlement period has been reduced progressively from T+5 to T+3 days. Currently T+2 day settlement cycle is being followed.

Trading in Retail Debt Market is permitted under Rolling Settlement, where in each trading day is considered as a trading period and trades executed during the day are settled based on the net obligations for the day. Settlement is on a T+2 basis i.e. on the 2nd working day. For arriving at the settlement day all intervening holidays, which include bank holidays, NSE holidays, Saturdays and Sundays are excluded. Typically trades taking place on Monday are settled on Wednesday, Tuesday's trades settled on Thursday and so on.

### Derivatives Trading

In order to assist market participants to manage risks better to hedging, speculation and arbitrage, Securities Contract (Regulation) Act was amended in 1995, to lift the ban on option in securities. However, trading in derivative did not take off, as there was no suitable legal and regulatory framework to govern these trades. Decides, it needed a lot of preparatory work- the underlying cash markets strengthened with the assistance of the automation of trading and of the settlement system; the exchanges developed

adequate infrastructure and the information system required to implement trading discipline in derivative instrument. The act was amended further in December 1999, to expand the definition of securities to include derivatives, so that the whole regulatory framework governing trading of securities could apply to trading of derivatives also.

The derivatives trading on the NSE commenced with S&P CNX Nifty Index futures on June 12, 2000. The trading in index options commenced on June 4, 2001 and trading in options on individual securities commenced on July 2, 2001. Single stock futures were launched on November 9, 2001. Today, both in terms of volume and turnover, NSE is the largest derivatives exchange in India. Currently, the derivatives contracts have a maximum of 3 months expiration cycles. Three contracts are available for trading, with 1 month, 2 months and 3 months expiry. A new contract is introduced on the next trading day following the expiry of the near month contract.

## MARKET PERFORMANCE OF CHINA

In 2004, the total turnover on the SSE was RMB 7,692.732 billion, 7.22% lower than the previous year, of which trading of stocks accounted for RMB 2,647.060 billion, or 34.41% of the total turnover. Of the stock trading turnover, A shares trading was RMB 2,622.930 billion, which accounts for 99.09% the total, B shares trading amounted to RMB 24.13 billion, or 0.19% of the total. Trading on T-bonds reached RMB 296.149 billion was spot trading and RMB 4,408.623 billion was bonds repo. Total funds' trading was RMB 24.91 billion. Daily average trading of stocks was RMB 1.0893 billion, 26.06% higher than the previous year; daily bonds trading was RMB 19.540 billion, down 23.54% from the previous year; daily fund trading was 103 million RMB, 31.33% lower than the previous year. The SSE 50 index opened at 997 and closed at 842.73, shedding 15.47% at the end of the year, with peak at 1141.99 and lowest at 833.09. Throughout the year, the SSE 50 index had a fluctuation of 37.08%. The SSE 180 index opened at 2820.24 at the beginning of the year and closed at 2362.7, down 16.25%, with its peak at 3278.82 and lowest at 2321.86, fluctuating within a band of 41.22%. The SSE composite index opened at 1492.72 and closed at 1266.5 with the peak at 1783.01 and lowest at 1259.43, fluctuating within a band 41.57%. The B Shares index opened at 104.87 and closed at 75.65, with the peak at 122.94 and lowest at 75.46.

2001-2005 - A four-year market slump which saw Shanghai's market value halved (after reaching a peak in 2001). A ban on new IPOs was put in April

2005 to curb the slump and allow more than US\$200 billion of mostly state-owned equity to be converted to tradable shares. In 2007, "stock market frenzy" as speculative traders rush into the market, making China's stock exchange temporarily the world's second largest in terms of turnover. Fears of a market bubble and intervention by authorities caused large fluctuation not seen since the past decade.

After reaching an all-time high of 6,124.044 points on October 16, 2007 the benchmark Shanghai Composite Index ended 2008 down a record 65% due mainly to the impact of the global economic crisis which started in mid-2008. As of February 2008, 861 companies were listed on the SSE and the total market capitalization of SSE reached RMB 23,340.9 billion (US\$3,241.8 billion; US\$1 = RMB 6.82).

## LITERATURE REVIEW

According to various researchers, there is both a theoretical and empirical debate among the researchers to address the question of the relation between stock returns of different emerging markets. Researchers have employed a wide variety of subtle ways to examine the interlink ages between Indian stock market and foreign stock markets.

Solnik (1987) employing regression analysis on monthly data for eight industrialized countries from 1979-83 found a weak but positive relation between real domestic stock returns and real exchange rate movements.

**Taylor, M.P** (1988) studied the impact of the abolition of UK exchange control on the degree of integration of UK and overseas stock market such as West Germany Netherlands, Japan and US by employing the Grangers Causality and Engel Granger Co integration test over the two sub periods spanning from April 1973 to Sept. 1979 and Oct.1979 to June 1986 respectively, the study concluded, there has no significant increase in the correlation of stock market returns as a result of the abolition of exchange control.

Ajay and Mougoue (1996) made an attempt to examine the intertemporal relation between stock indices and exchange rate for a sample of eight advanced countries during the period 1985 to 1991. By applying co integration and causality test on daily closing stock market indices and exchange rate, the study found (i) an increase in aggregate domestic stock price has a negative short run effect on domestic currency values, (ii) sustained increase in domestic stock price will induce domestic currency appreciation in the long run (iii) currency depreciation has negative short run and long run effects on the stock market.

## OBJECTIVES OF THE STUDY

The present study seeks to make a comparative analysis between China and Indian Stock Market and it is being conducted to examine the co variability of returns in these markets. This study is of **descriptive nature**. For the purpose of the study data will be collected from **secondary sources**. The present study envisages primarily the following research objectives:

- To bring out the potential for diversification in India and China by studying correlations in the index returns
- To measure and analyze compounded growth of Indian Stock market and China Stock Market

## Hypotheses

**H0:** There is no significant degree of correlation in Indian and Chinese Stock Markets

## RESEARCH METHODOLOGY

The political and economic scene across the globe witnessed marked changes during this period. This period is sufficient to examine the co variability because this period covers all the major events, such as depression, recession, boom, political turn moils, coalition government, full convertibility of currency, passing of right to information Act, etc.

## Sample Size

The proposed study will be based on the study of Indian and China markets. Seven year weekly data of 2 Stock Markets is used for the research which is collected from secondary sources.

**Table 1-1**

S.No.	Country	Index
1.	India	BSE 30
2.	China	SSE COMPOSITE

## Source of Data

Data is collected from the web sites of indexes. And other related sites are also used for the collection of the data. The names of websites are as follows:

- www.nasdaq.net
- www.bseindia.com
- www.nseindia.com
- www.finance.yahoo.com
- www.infomine.com

## DATA ANALYSIS

For the analysis of the data different methods such as bivariate correlation, average mean and regression analysis is used as major tools are used. For the

convenience of the readers results have been shown by graphs and Tables wherever needed.

Correlation is the statistical tool used to measure the degree of relationship between different variables. When the values of one variable are associated with or influenced by other variable, Karl Pearson's coefficient of correlation can be use as a measure of linear relationship between them. As the study is aimed at finding relationship between Indian and China Stock Markets, therefore bivariate correlation is used to analyze the extent to which each country's stock market is related with another. By looking at table 1-2, following results can be concluded: From the sample, there is modest level correlation between China and India at 0.01 level of significance.

**Correlations Table 1-2**

		China
India	Pearson Correlation	.770(**)
	Sig. (2-tailed)	.000
	N	314
		India
China	Pearson Correlation	.663(**)
	Sig. (2-tailed)	.000
	N	314

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

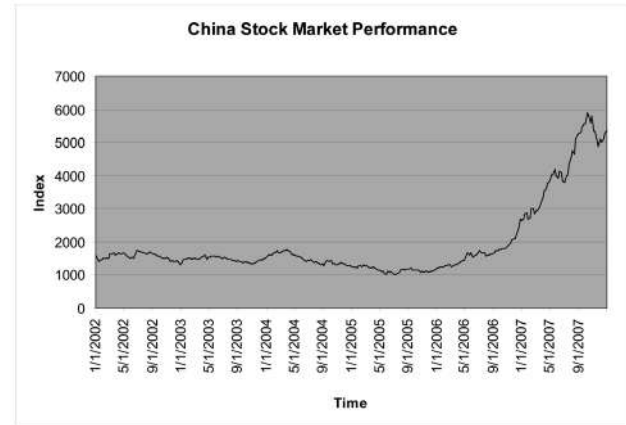
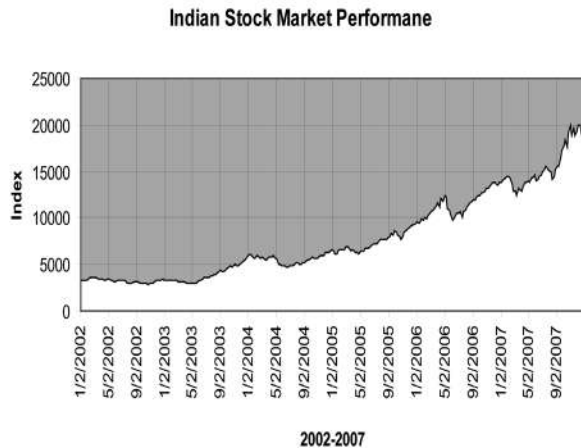
**Descriptive Statistics Table 1-3**

Countries	N	Minimum	Maximum	Mean
India	314	2875.53	20686.89	7894.4928
China	314	1013.64	5903.26	1928.4973

## Index Growth

During the last few years or a decade, stock markets of a large number of economies have undergone drastic changes. These changes are positive as well as negative. Revolution through electronic trading and dematerialization has increased number as well as volume of transactions robustly. The political and economic scene across the globe witnessed marked changes during this period. Therefore the study has measured average mean and compounded annual growth rate of different indexes of sample countries which is depictes809d through following charts:

Study has founded significant relationship between Indian Stock Markets and China at .01 significance level and hence hypothesis (Ho 1: There is no significant degree of correlation in Indian and Chinese Stock markets) is rejected.



## FINDINGS & SUGGESTIONS

As study is conducted for a long period, therefore investors can take the benefit of diversification in long periods. Hence, investors can take the advantages of diversification by investing in countries having high degree of negative correlation with their home country. At the same time they can take the benefits of investment in those countries which have high restriction for entry of foreign investors or having very high transaction costs by investing in highly positive country vis a vis the restrictive country. But as the economies are undergoing through different reforms and fundamentals keep on changing therefore due care should be taken while taking investment decisions. This study alone should not be taken as the basis of selection of stock market.

The correlation between India and china (.770) which shows the least correlation between these two stock exchanges. But these two stock exchanges are significantly related and affect each other's operation to the market volatility. The prices of stocks on markets around the world do not move together synchronously because the economic systems in which those markets are located have dissimilar environments in terms of taxation, Industrial growth, Political stability, Monetary Policy and other factors. Low levels of co-movement of stock prices offer investors the benefit of diversifying their holdings across the markets of countries. That is, investors who allocate some of their portfolio to share from other countries can increase the portfolio's expected return with no increase in risk. This benefit of international diversification has led many investors to allocate some of their wealth to foreign markets and shares of foreign firms.

Methods of trading vary considerably throughout

the world. Electronically assisted market-maker trading has become prevalent throughout the world. Another trend in trading organizations is that they are becoming or are considering becoming public companies wherein their stock in the exchange is owned and traded by the public.

## REFERENCES

- Aggarwal, Reena, Inclan, Carla and Leal, Ricardo (2005), "Volatility in Emerging Stock Markets". Sources: www.google.com
- Amihud, Y and Mendleson, H (1987), "Trading Mechanisms and Stock Return: An Empirical Investigation", *The journal of Finance*, Vol. XLII, No.3, 533-55
- Campbell, Sean D. (2005), "Stock Market Volatility and Great Moderation", Finance and Economic Discussion Series.
- Chung, J.R., (1990), "Price Limit System and Volatility of Korean Stock Market", *Pacific Basin Capital Markets Research*, vol. II, 283-90.
- French, K.R. and Roll, R. (1986), "Stock Return Variance-The Arrival of Information and Reaction of Traders", *Journal of Financial Economics*, No.17, 5-26.
- Ho, Y.K. and Cheung, Y (1984), "Seasonal Pattern In Volatility In Asian Stock Market", *Applied Finance Economics*, 4, 61-67.
- Jones, Charles P., Walkar, Mark D and Wilson, Jack W. (2004), "Analyzing Stock Market Volatility Using Extreme-day Measures", *The journal of Finance Research*, Vol. XXVII, No. 4, 585-601.
- Keith K. H. Park, Antoine W. van Agtmael, "The world's emerging stock markets: structure, developments and regulations
- Raju, M.T. and Ghosh, Anirban (2004), "Stock Market Volatility-An International Comparison",

Securities and Exchange Board of India.

- Reddy, Y.S. (1997-98), "Effects of Microstructures on stock Market Liquidity and Volatility", Prajanan, Vol. XXVI, No. 2, 217-31.
- Schewert, W.G (1989A), "Margin Requirement and Stock Volatility" journal of Financial Services Research, December, 153-69.
- Schewert, W.G (1989b), "Why Does Stock Market Volatility Change Over Time?" the Journal of Finance, Vol. XLIV, No.5, 1115-51.

#### Websites

- [www.sse.com.cn](http://www.sse.com.cn)
- [www.nseindia.com](http://www.nseindia.com)
- [www.finance.yahoo.com](http://www.finance.yahoo.com)
- [www.infomine.com](http://www.infomine.com)
- [www.marketvolume.com](http://www.marketvolume.com)
- [en.wikipedia.org/wiki/Stock\\_market](http://en.wikipedia.org/wiki/Stock_market)
- [www.bullinvestors.com](http://www.bullinvestors.com)
- [www.britannica.com](http://www.britannica.com)
- [www.asiamarketresearch.com](http://www.asiamarketresearch.com)



# TAX REVENUE AND ITS IMPACT ON ECONOMIC DEVELOPMENT: AN EMPIRICAL ANALYSIS

**Kshitij Maharishi**  
**Anurag Agnihotri**  
**Sunil Kumar**

***Abstract:** There are two major types of taxes: direct taxes and indirect taxes. In this research paper, for the purpose of comparing these types of taxes in India and Bhutan, we have taken a sample of tax revenue collected under the heads of direct and indirect taxes. This sample ranges from 2004-2005 to 2014-2015. The results show that Bhutan is generating more tax revenue through indirect taxes whereas India is from direct taxes. By comparing the two regression equations and the standardized betas, we come to know that in Bhutan, more revenue is charged by levying indirect taxes where as India is on the opposite side of it. The results of these two types of fiscal policies can be very different and the more the indirect taxes in country, the more will be increasing gap between rich and poor and thus the more will be the exploitation of labor class. In this paper an attempt has been made to analyze the impact of taxation on the economic development of India and Bhutan*

***Key words:** Indirect tax, direct tax, tax revenue*

## Introduction

Tax can be defined as the charge levied by the government of a country upon its habitants for its support or for the purpose of facilitating the public of that country. It is neither a voluntary payment by the tax payer nor like a donation. Rather it is an enforced payment to the government. On nonpayment of it, the tax payer will be punishable by law. The purpose of taxes is to create welfare for the society by providing public services, protection to properties, defense expenses, economic infrastructure etc. There are four main purposes of taxation which are revenue (collect a sum of money for government), redistribution (transfer from rich to poor), reprising (levied on harmful things e-g; tobacco, carbon), representation (accountability to general public by the government) (wikipedia.com). In case of direct taxes, the taxpayers are generally more curious to know about their taxed income. That's why they stress the government for the representation of its consumption. Taxes are levied at different percentage

rates. These percentage rates are determined by comparing with income or consumption level. It has three basic types that are progressive, regressive and proportional rates. There are two major types of taxes which are direct and indirect taxes. There are different views about the definition of these two types. In simple words it can be describes as direct taxes are those the burden of which is directly born by the tax payer and contrary to this if the burden of taxes is transferred to other or public, are called indirect taxes.

In Bhutan, at the time of independence, the fiscal system was followed by the Government of India Act 1935. Later it was followed in accordance with Islamic Republic of Bhutan Act 1973. Federal government levy taxes in Bhutan and provincial governments are also assigned powers to impose certain types of direct taxes. At the time of independence, Income Tax Act 1922 was applicable in Bhutan. After independence it was converted into Income Tax Act 1979. In 1980s major economic changes took place due to centralization. In 1990, tax policy reforms were made to meet the

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changing requirements of the economy. At present, the Income Tax Ordinance 2001 rules are followed. The income tax is the main source of direct tax and there are several others that may be included in it such as property tax, poll tax and foreign travel tax etc. Indirect taxes include custom, sales tax, airport value tax etc. In India, the history of tax system dates back to ancient history. It can be found out in their ancient books like "Manu Smriti" and "Arthashastra" that in the early times taxes were basically charged on sale and purchase of merchandise. In the Mughal's reign, different types of taxes were collected from inhabitants of India. The British Rule also contributed a lot while establishing tax system in India because it was in favor of them. The first full-fledged taxation administrative system in India was developed in 1922. Direct taxes charged by the central government of India include income tax, wealth tax, estate tax, gift tax etc. Indirect taxes include custom, service tax, general sales tax, entertainment tax etc. A comprehensive list of direct and indirect taxes (and their respected abbreviations to use for calculation purpose for this paper) of both India and Bhutan is given in table-5 in appendix.

## Literature Review

An appropriate fiscal policy is a vital ingredient for economic development. Despite being a short run policy measure, fiscal policy can have lasting macroeconomic consequences. In the debate about economic policy, fiscal policy is viewed as an instrument used to mitigate short run fluctuations in output and employment and bring the economy closer to potential output. Fiscal policies are in large part contingent on government's expenditure allocations and revenue collections. Persistent budget deficits could be avoided if policy makers understand the nature of the nexus between expenditure and revenue. On the policy side, the nature of the relationship between government expenditure and government revenue can be of three types. First, if government revenue causes government expenditure, budget deficits can be eliminated policies aimed at producing more government revenue. Second, if government expenditure causes government revenue, it implies government behavior as one where it spends first, and later, to pay for this spending, they raise taxes. Such a situation creates capital outflow due to the fear paying higher taxes in future. Third, the expenditure decisions are made in isolation from revenue decisions which can lead to serious budget deficits because government expenditure increases more rapidly than government revenues. For these reasons, it is crucial to study the government expenditures and government revenues (Gounder, Narayan, & Prasad, 2007). Restructuring

the tax system at federal level was central to the entire process of economic reforms. Direct tax reforms at federal level formed key component of wider reforms in fiscal and economic sector. Like in other developing countries, in India also the tax reforms aimed at correcting fiscal imbalances (Panday, 2006). The rise of the value-added tax (VAT) around the world has been one of the most important tax developments of recent times. This tax is considered to have advantages compared with other taxes, because it eliminates cascading, allows for zero rating of exports, and is broad based and difficult to evade. A very slightly modified form of VAT was general sales tax (GST) which was imposed in Bhutan in 1991 tax reforms. It was considered that GST was a type of regressive tax but this perception was wrong as they proved to be progressive (Refaqat, 2003). For a global tax to result in a net increase in global aid inclusive of the tax revenue, it has to generate not only a positive income effect but also this effect must be large enough to more than compensate for the tax's excess burden and administrative costs. Whether such a condition can be satisfied by any global tax is highly questionable, or at the very least remains opens empirical issue (H.Zee, 2006). Indirect taxes are often politically favorable because the burden can be hidden. These taxes give consumers a choice. An individual consumer can decide whether to buy a product and, assuming he is aware of the tax at all, whether to bear the burden of tax. Indirect taxes contain their own protection against abuse. They cannot be raised too high or revenue will decrease because consumption will decline. In contrast, direct taxes hit the pocketbooks of taxpayers painfully, with little if any option to avoid paying. I think that the direct tax means a consumption tax that is applied directly to individuals and that does not take the form of the traditional indirect tax on consumption (M.Jensen, 1997). The sector composition of output also matters because certain sectors of the economy are easier to than others.

For example, the agriculture sector may be difficult to tax, especially if it is dominated by a few large number of subsistence farmers. On the other hand, a vibrant mining sector dominated by a few large firms can generate large taxable surpluses. Imports and exports are amenable to tax as they take place at specified locations. The degree of external indebtedness of a country may affect revenue performance as well. To generate the necessary foreign exchange to service the debt, a country may choose to reduce imports. In such a scenario, import tariffs or other taxes with a view to generate a primary budget surplus to service the debt (Gupta, 2007). Shifts in consumption patterns toward good and services with lower (higher) VAT

rates and higher (lower) tax evasion during economic contractions (expansions) are key channels through which the output gap affects VAT C-efficiency. During contractions (expansions), households consume a higher (lower) share of their income on necessity goods and services, which in many countries are either not taxed or taxed at a lower than the VAT standard rate. A closer examination of the determinants of tax evasion reveals that VAT C-efficiency is positively correlated with stronger institutional underpinnings of the revenue administration and negatively correlated with the overall tax burden in the economy (Sancak, Vellos, & Xing, 2010). Recent endogenous growth models have demonstrated that growth can be enhanced by reducing fiscal imbalances, which, in turn, can be achieved by either lowering expenditure or raising revenue. However, many countries in the region have reduced expenditure to minimum sustainable levels, especially in health, education, and infrastructure. Thus, raising tax revenue to achieve fiscal sustainability would be a feasible alternative. Also, in order to improve the environment for private sector development and sustained economic growth, governments need to play supportive role by investing in physical and human capital, and institutional infrastructure. Tax revenue is needed for such expenditure if inflationary financing and the crowding out of the private sector are to be avoided (Ghura, 1998).

### Methodology

To measure the direct and indirect taxes of India and Bhutan, and then the effect of these two types of taxes was seen on the total revenue on both of the countries. It is done by generating two simple regression lines for two countries. Total revenue of both countries was taken as dependent variable and direct and indirect taxes were taken as independent variables. The purpose for generating regression line was to see the individual effect of direct and indirect taxes on total revenue and then compare the results of both countries.

Sample Size Table-1 shows the categories of direct and indirect taxes and their abbreviations used for making regression models for both India and Bhutan. We have used panel data of direct and indirect taxes of both countries from 2005 to 2015. Bhutan has approximately half subcategories in both direct and indirect taxes as

**Table 2: Coefficients (a)**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error			
1 Constant)	32695.45 r	28387.85		-1.152	.287

compared to India.

### Hypothesis

For the purpose of testing whether the indirect taxes have more effect on total revenue, we developed two hypotheses of Bhutan and India which are given below:

1:Ho: Revenue from indirect taxes does not have greater effect on total revenue of Bhutan H1: Revenue from indirect taxes has greater effect on total revenue of Bhutan 2:Ho: Revenue from indirect taxes does not have greater effect on total revenue of India. H1: Revenue from indirect taxes has greater effect on total revenue of India. These two types of hypotheses were tested by using SPSS (statistical package for social sciences).

### Results and Findings

The results of them are given below

For Bhutan  $Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \epsilon$

Where

Y= Total Revenue

$\beta_0$  = Y intercept

$\beta_1$  = Slope of direct taxes

$X_1$  = Direct Taxes

$B_2$  = Slope of direct taxes

$X_2$  = Direct Taxes

$\epsilon$  = Error variable

**Table-1 and Table-2 gives the results of regression:**

**Table 1: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of The Estimate
1	1,000(a)	.999	.999	9102.49678

Table-1: Shows that the value of R-square is 0.999, which indicates that the 99.9% change in total revenue is due to the direct and indirect taxes and the remaining change in total revenue is due to non-tax revenue items such as fee charges from college or universities etc. It shows approximately perfect positive correlation between taxes and total revenue.

X1	.627	.310	.216	2.024	.083
X2	1.495	.203	.785	7.356	.000

a Dependent Variable: Y

Table-2 shows that the regression line can be expressed as:

$$Y = -32695.451 + 0.627X_1 + 1.495 X_2 + \epsilon$$

The above equation shows that if the direct taxes increased by Rs. 1, the total revenue will be increased by Rs. 0.627 and if the indirect tax increases by Rs. 1, the increase in the total revenue would be Rs. 1.495. Although it does not make good sense but by looking at the standardized betas and t-ratios, we come to know that indirect taxes have more statistically significant impact on the total revenue.

For India

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \epsilon$$

Where

Y= Total Revenue

$\beta_0$  = Y intercept

$\beta_1$  = Slope of direct taxes

X1 = Direct Taxes

B2 = Slope of direct taxes

X2 = Direct Taxes

$\epsilon$  = Error variable

**Table 3: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.961(a)	.923	.901	11448261232

Table-3 shows that the value of R-square is 0.923, which indicates that the 92.3% change in total revenue is due to the direct and indirect taxes and the remaining change in total revenue is due to non-tax revenue items such as fee charges from college or universities etc. It shows high positive correlation between taxes and total revenue.

a Dependent Variable: Y

Table-4 shows that the regression line can be expressed

Table 4: Coefficients (a)

Model	Unstandardized	Coefficients Std Error	Standardized Coefficients	t	Sig.
	B	Std Error	Beta	B	Std. Error
1 Constant)	306572.927	160253.581		1.913	.097
X1	2.293	1.546	.815	1.483	.182
X2	.316	1.167	.149	.270	.795

as:  $Y = 306572.927 + 2.293X_1 + 0.316 X_2 + \epsilon$  The above equation shows that if the direct taxes are increased by Rs. 1, the total revenue will increase by Rs. 2.293. It shows the multiple effect on revenue by looking at the standardized betas and t-ratios, we come to know that direct taxes have more statistically significant impact on the total revenue and if the indirect tax will increase by Rs 1, the increase in the total revenue would be Rs.0.316.

**Conclusion**

By comparing the two regression equations and the standardized betas, we come to know that in Bhutan, more revenue is charged by levying indirect taxes where as India is on the opposite side of it. The results of these two types of fiscal policies can be very different. Literature supports that the proportion of the indirect taxes must be less than that of direct taxes. The more the indirect taxes in country, the more will be increasing gap between rich and poor and thus the more will be the exploitation of labor class. Taxes are the greatest source of revenue for any government for the running of its operations. Fiscal policy plays a crucial role in the growth of an economy by employing direct and indirect taxes and in what proportion. In this paper, we tried to compare the direct and indirect tax revenue of Bhutan and India. By comparing the two regression lines it become obvious that Bhutan has a favorable policy for employing indirect taxes whereas India generates its more revenue through direct taxes. Bhutan is failing to reduce its fiscal deficit despite large parts of the country’s economy, including rich landlords, not being taxed. The tax-to-GDP ratio is only 10.2%, one of the world’s lowest. About 65% of the country’s budget goes to debt retirement, defense expenditures and the current expenditures of the government, while 60% of the economy is outside the tax net. And currently, Bhutan is also facing the threats of IMF for changing the structure of taxes to get more aid. In such situation, Bhutan fiscal policy makers need to be very much careful analysis of long

term planning. The more attention should be given on direct taxes otherwise the rich and poor increasing gap would be harmful for the country. The corrective action must also be taken to reduce the tax evasion, tax base should be increased to generate more revenue, and the major problem of corruption should be given high attention.

## References

1. Aizenman, J., & Jinjark, Y. (2008). The Collection Efficiency of the Value-added Tax: Theory and International Evidence. Vol 17 (Issue 3), pp. 391-410.
2. Alesina, A., & Rodrik, D. (2004). Distributive Politics and Economic Growth. Quarterly Journal of Economics, Vol. 109 (No. 2), pp. 465-90.
3. Alesina, A., & Weder, B. (2002). Do Corrupt Governments Receive Less Foreign Aid? American Economic Review, Vol. 92 (No. 4), pp. 1126-37.
4. Asher, M., & Rajan, R. (2009). Globalization and Tax Systems: Implications for Developing Countries with Particular Reference to Southeast Asia. CIES Discussion Paper, Vol. 99 (No.23).
5. Das, S. P. (2014). The Political Economy of Revenue Pressure and Tax Collection Efficiency. Indian Growth and Development Review, Vol 4 (Issue 1), pp. 38-52.
6. Ghura, D. (1998). Tax Revenue in Sub-Saharan Africa: Effects of Economic Policies and Corruption. IMF Working paper.
7. Gounder, N., Narayan, P. K., & Prasad, A. (2007). An Empirical Investigation of the Relationship between Government Revenue and Expenditure: The Case of the Fiji Islands. International Journal of Social Economics, 34.
8. Gupta, A. S. (2015). Determinants of Tax Revenue Efforts in Developing Countries. IMF Working Paper.
9. H.Zee, H. (2006). A Note on Global Taxes and Aid for Development. Journal of Economic Studies.
10. M.Jensen, E. (2007). The Apportionment of Direct Taxes. Columbia Law Review.
11. Panday, M. (2014). Direct Tax Reforms in India.
12. Refaat, S. (2003). Social Incidence of the General Sales Tax in Bhutan. IMF Working Paper. Sancak, C., Velloso, R., & Xing, J. (2010). Tax Response Revenue to the Business Cycle. IMF Working Paper.
13. Tyc, V. (2014). Harmonization of Indirect Taxes in the European Union. International Journal of Law and Management, Vol. 50 (Issue. 2), pp. 87-92.
14. Viboonthanakul, S. (2009). Smuggling via E-Commerce: Effect on Tax Revenue. Journal of International Trade Law and Policy, Vol. 8 (Issue. 3), pp. 272-290.
15. Yitzhaki, S. (1979). A Note on Optimal Taxation and Administrative Costs. American Economic Review, Vol. 69 (No. 3), pp. 475-80.

## Appendix-1

## Direct Indirect Taxes in Bhutan

		Bhutan		
		Total Direct Taxes	Total Indirect Taxes	Total Income
Year	Total tax Revenue	TDT	TIT	Total Revenue
2005-06	347104	112950	234154	882300
2006-07	392278	124585	267693	535091
2007-08	404273	142649	261624	619069
2008-09	458900	145000	313900	701576
2009-10	510000	161500	348500	760984
2010-11	590000	182700	407300	875306
2011-12	715712	234739	480973	1022704
2012-13	839598	320619	518979	1214043
2013-14	1005569	388250	617319	1398919
2014-15	1251462	496000	755462	1679239

## Direct Indirect Taxes in India

		India		
		Total Direct Taxes	Total Indirect Taxes	Total Income
Year	Total tax Revenue	DR	IR	Total Revenue
2005-06	274583.08	112950	213718.79	882300
2006-07	105320.24	60864.28	233556.67	535091
2007-08	314535.19	71763.57	241424.32	619069
2008-09	356638.23	73110.87	269545.67	701576
2009-10	414084.77	81092.56	304538.17	496699.3
2010-11	494370.1	109546.6	357277.33	587766.66
2011-12	587687.31	137092.77	420052.77	696284.95
2012-13	736107.72	167635.04	505331.4	870543.1
2013-14	891 302.61	304138.29	587164.32	1050520.43
2014-15	1039040.1 7	363437.24	675602.93	1193286.64

## Appendix 2

## Comprehensive List of Tax Revenue in India and Bhutan

Bhutan

## Direct Taxes

Income tax and corporation tax (IC)  
Wealth and Welfare tax (WW)  
Worker's participation tax (WP)  
Foreign Travel Tax (FT)  
Capital Value Tax (CVT)

## Indirect Taxes

Custom (CU)  
Federal Excise Tax (FE)  
Sales Tax (S)  
  
Airport Value Tax (AV)

India

Corporation Tax (C)  
Income Tax (I)  
Estate Duty (ED)  
Wealth Tax (W)  
Gift Tax (G)  
Land Revenue (LR)  
Agricultural Tax (A)

Customs (CU)  
Union Excise Duties (UED)  
Service Tax (SR)  
State Excise Duty (SED)  
Stamp and Registration (STR)  
General Sales Tax (GST)  
Taxes on Vehicle (V)  
Entertainment Tax (EN)

# PERCEPTION OF TAX PAYERS TOWARDS E-FILING OF TAX RETURN: AN ANALYTICAL ANALYSIS

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**Abstract:** In 2014, income tax department has established a system for centralized process of returns and one prominent type is the introduction of electronic filing system for income tax payers. A system was desired that would make the process of filing of income tax returns (ITR) easier for taxpayers and as well as reduce the time required for data entry at tier end of receipt of income tax returns (ITR). Electronic filing is an effective method of filing income tax returns online. The major advantage of electronic filing includes the ease of use, technology, reduction in rush and saves the time.

An attempt has been made to identify the factors that are responsible for adoption of e-filing of income tax returns and to examine the taxpayers' satisfaction with an online system for filing individual income tax returns. A survey has been used to collect primary data and questionnaire approach was used in final analysis. Single cross sectional descriptive research design was used to determine taxpayers' perception. SPSS and Microsoft Excel have been used to analyze and interpret the data. The data collected has been analyzed through a series of tools and procedures. Cross tabulation, Graphical Representation, Rank Analysis and ANOVA have been used. With proper assistance from the tax-filing system and service centers, people can be made familiar to filing income taxes online. Replications among other samples are needed to validate the current finding. The study is confined to the taxpayers located in Bhiwani and Sirsa cities of Haryana. So, the conclusion derived from the research cannot be generalized across the country.

**Keywords:** Electronic tax filing, Perception, Taxpayers

## INTRODUCTION

E-filing is the process of filling your tax documents through internet with the help of software's or by registering yourself to the income tax website.

An income tax return could be e-filed in three ways. In the first option, an assessee could e-file his tax return digitally signed. This is an anytime, anywhere, and paperless filing process which did not require visit to the income tax office. But an assessee could use this facility only if he has a digital signature. In the second

e-filing option, the return was filed on the internet, but without a digital signature. At the end of such e-filing process, the assessee prints out a single page receipt cum verification form (ITR-V) which he was required to sign in ink. This ink-signed ITR-V form is to be physically delivered in duplicate to the income tax office and one copy of it is returned to the assessee, duly acknowledged. This physical filing of ITR-V must be done within 15 days or else the date of filing ITR-V will be deemed as the date of income tax return filing. The third option provides for assessee to e-file

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their return through an e-return intermediary who on payment of a prescribed fee, would did the e-filing and also assisted the assessee in submitting the ITR-V to Income Tax Department.

CBDT has vide notification No. 34/2013 dated 01.05.2013 has made it mandatory for the following category of the Assesses to file their Income Tax Return Online from A.Y. 2013-14:- (a) It is mandatory for every person (not being a co. or a person filing return in ITR 7) to e-file the return of income if its total income exceeds INR. 5,00,000. (b) An individual or a Hindu undivided family, being a resident, having assets (including financial interest in any entity) located outside India or signing authority in any account located outside India and required to furnish the return in Form ITR-2 or ITR-3 or ITR-4, as the case may be. (c) Every person claiming tax relief under Section 90, 90A or 91 shall file return in electronic mode. (d) Those who are required to get their Account under Section 44AB (e) A firm required to furnish the return in Form ITR-5 or an individual or Hindu Undivided Family (HUF) required to furnish the return in Form ITR-4 and to whom provisions of section 44AB are applicable. (f) A company required to furnish the return in Form ITR-6.

## REVIEW OF LITERATURE

Previous studies found that a combination of positive and negative beliefs about technology underlies the domain of technology readiness (Dabholkar, 1994; Mick and Fournier, 1998). In particular, Dabholkar (1994) found that individuals simultaneously harbor positive (favorable) and negative (unfavorable) beliefs about technology. The positive beliefs propel individuals towards new technologies, while negative beliefs may hold them back.

Ramlah Hussein, Norshidah Mohamed, Abd Rahman Ahlan, Murni Mahmud (2011) aimed to investigate the factors influencing citizens' intention to use e-filing in the Malaysian context. The study used quantitative approach methodology.

In total, 500 self-administered questionnaires were distributed and 411 were found usable for data analysis; 14 hypotheses were formulated and tested. Perceived ease of use and perceived usefulness, trust of the government, image, compatibility and service quality are found to be significant predictors of citizens' intention to use e-filing. Lemuria Carter, Ludwig Christian Shaupp, Jeffrey Hobbs, Ronald Campbell (2011) investigated the influence of six determinants on taxpayers' intention to adopt e-file systems. A survey was administered to 304 US taxpayers to capture their perceptions of e-filing. The survey was developed

using existing scales in the literature. The findings of this research show that theoretical constructs from the UTAUT model are well suited in explaining intentions to use multiple e-government services. Specifically, the results indicate that three factors from the UTAUT model (performance expectancy, effort expectancy and social influence) play a significant role in predicting taxpayers' e-filing intentions. More importantly, the research findings indicate that personal factors (web-specific self-efficacy (WSSE) and perceived security control), along with UTAUT factors, have a significant impact on taxpayers' e-file intentions. Mohamed Gamal Aboelmaged (2010) intended to predict e-procurement adoption through integrating the constructs of the technology acceptance model and the theory of planned behavior. Researchers found from the survey result that behavioral intention toward e-procurement technology is mainly determined by user's attitude and additionally influenced by perceived usefulness and subjective norm. The paper provides procurement system developers and managers with a useful adoption model that demonstrates the significance of perceived usefulness of e-procurement system in influencing the adoption decision. This highlights the importance of maximizing the benefits of e-procurement system for potential users to facilitate the adoption process. Kun Chang Lee, Melih Kirlidog, Sangjae Lee, Gyoo Gun Lim (2008) compared the web-based tax filing systems of Turkey and South Korea. The comparison is based on user satisfaction which has parameters such as ease of work, adequacy of the amount of information, display speed, convenience to life, job productivity, and help service. The tax filing systems are presented along with a background of such systems and their usability parameters. The study shows that users in the two countries felt differently in such factors as ease of work, adequacy of the amount of information, display speed, convenience to life, job productivity, and help service. Although Turkey has a complex tax system Turkish users did not find the tax filing system difficult to use and that may be attributable to the fact that they are accounting professionals who frequently use the system. José Carlos Pinho, Isabel Maria Macedo (2008) aimed to analyze the antecedents and consequences of online satisfaction within the context of e-government, which increasingly play an important role in modern public administrative management. Specifically, the taxation services offered through the web-based electronic declaration system. A quantitative methodological approach, a survey was applied to a sample of 351 certified accountants to empirically test the conceptual model. The results of this empirical study validate four out of five hypotheses. It was found that convenience



is an important antecedent of both satisfaction and online service quality. Additionally, findings suggest that both the degree of satisfaction and online service quality impacts on the intention of using the taxation website. Siriluck Rotchanakitumnuai (2008) studied the e-government service quality and risk perceptions of personal income taxpayers on e-government service value. The study used qualitative in-depth interview and content analysis to explore the determinants of e-government service quality and risk dimensions of e-government service value. The findings suggested that perceived value of e-government service is e-government service quality, which consists of service design, web site design, technical support, and customer support quality. On the other hand, the three perceived risk concerns are performance, privacy and financial audit risk. Reyes Gonzalez, Jose Gasco, Juan Llopis (2007) analyzed the evolution and current status of e-government, trying to deduce a series of basic principles for its success. A case study method was used to achieve that aim, but prior to its presentation, a short review of the e-government literature along with some facts and figures have made. The authors concluded that E-government lays emphasis on technology; however, the internal processes through which public administrations offer their services to citizens need careful reengineering. Julian Teicher, Owen Hughes, Nina Dow (2002) examines the concept of quality and its application to the public sector and discusses e-government, the latest manifestation of attempts to improve quality in government. The paper also reports on a survey of senior personnel across the three levels of government in Australia. The results of the survey and other published research materials suggested that the impact of e-government on service delivery is modest and not well distributed. While there has been widespread adoption of e-government measures, these have generally been lacking in sophistication and have been disproportionately beneficial to city dwellers without addressing problems of equity and access.

### OBJECTIVES OF THE STUDY

1. To examine the awareness level of tax payers towards e-filing system.
2. To analyze the impact of e-filing on the efficiency of tax administration system
3. To study the perception of taxpayers towards the e-filing.

### RESEARCH METHODOLOGY

The researchers conducted pilot study before distributing to the respondents. 30 respondents were chosen in order to know the questionnaires constructed

are reliable and understood by the respondents. Single Cross Sectional Descriptive Research design had been adopted to determine the Direct tax code conceptual understanding and perception of taxpayers towards e-filing for the Bhiwani and Sirsa cities of Haryana State. A convenience Sampling was used to elicit information regarding perception of taxpayers towards the e-filing and areas covered are Bhiwani and Sirsa. A five-point Likert-type scale is used in this study, anchored by "strongly disagree" to "strongly agree". The data were analyzed using statistical software tool (SPSS 20.0) with the uses of, rank analysis, Anova and Descriptive Statistic. The research sample size is determined using sample size calculator which is 246 tax payers as the researcher's respondent. Sample size was determined using following formula.

$$n = \frac{z^2 pq}{d^2}$$

$$n = \frac{(1.96)^2 (0.20) (0.80)}{(0.05)^2} \quad n = 245.8624 = 246$$

The survey instrument is a 5 point Likert scale questionnaire survey divided into two sections. Section A contained questions on tax payers demography. Section B contained questions to measure tax payer's perception on different attributes of e-filing system. With respect to the measurement of the variables, the study adopted the scales developed and used by Venkatesh, Morris and Davis in their famous article on the Unified Theory of Acceptance and Use of Technology UTAUT.

### DATA ANALYSIS AND INTERPRETATION

The component analysis and rotated components' analysis reveals that three variables do not form any constructs, (not a part of any of the grouping variables). From the communality table also it can be stated that these components explain very less variability. So, these variables are deleted from the further survey and analysis. So, there are total 22 variables/dimensions remaining and they are divided in to six groups namely Perceived Ease of Use (Effort Expectancy), Performance Expectancy, Behaviour intention, Risk perceived, Social Influence and System Expertise.

A measure of construct reliability (Cronbach's Alpha) was computed for each dimension to assess the reliability of the set of items forming that dimension. The coefficients range from 0.8746 to 0.7325. As a rule 0.70 or more represent satisfactory reliability of the items measured.

**Table 1 Cronbach’s alpha (α) value**

Dimensions	Cronbach's alpha (α)
Effort Expectancy	0.7647
Performance Expectancy	0.8679
Behavior intention	0.8236
Risk perceived	0.7325
Social Influence	0.7962
System Expertise	0.8746

**Table 2 Profile of Respondents**

Category	Frequency	Percentage
Age :		
<30 years	43	17
30- 45 years	144	59
45- 59 years	52	21
60- 80 years	7	3
Total	246	100
Education:		
Under Graduate	134	54
Graduate	89	36
Post Graduate	246	100
Occupation:		
Salaried employees	189	77
Professionals	57	23
Total	246	100
Gender		
Male	179	73
Female	67	27
Total	246	100

Researcher asked survey respondents’ opinions on how much experience (in years) they having of using computers, the findings show that 5.285% has less then

1 year experience, 41.87% of the respondents having 1-5 years of experience and 52.85% of the respondents having experience of more than 5 years. About 36.99% of the respondents have 1-5 years internet usage experience, around 44.31%, 16.26% and 2.44% of the respondents have 6-10 years, 11-15 years and 16-20 years of years internet usage experience respectively. Merely 9.35% of the respondents’ uses internet for 11-15 hours in a day, 67.89% of the respondents uses the internet for 1-5 hours in day. Only 6.91% of the respondents do not file their tax personally while 93.09% of the respondents file tea returns personally. Out of those who file their return personally (i.e. 229 respondents) only 76 respondents are e-filers and remaining 153 are non e-filers. All the 76 e-filers are filing e-returns from their respective offices.

**Profiles of the e-filers**

Out of 246 respondents only 229 have filed their returns personally, and out of those only 33.19% had attempted e-filing, majority of the e-filers are professionals and aged between 30-45 years. There are only 67 female respondents, but then only proportionate female e-filers are less than male respondents. So, it can be concluded from the survey results that males appeared to be more technology adopters than females; females experienced greater difficulty with e-filing as compared to males; older people tended to be less optimistic about e-filing and older people experienced more discomfort with e-filing as compared to younger people. The survey result found that all e-filers are filing their returns from their office/work place only. In respect of time taken to e-file successfully, 78.7% of the e-filers indicated that they took less than 30 minutes to 1 hour, remaining of them (21.3%) have completed between 1-2 hours. The reasons for using e-file are summarized as follows:

**Table 3 Reasons for using e-file**

Parameters	1	2	3	4	5	Weighted Score	Mean Score
Good and pleasant	2	6	13	27	28	3.960526	2
	2.63%	7.89%	17.11%	35.53%	36.84%		
Convenient & easy to use	1	3	8	22	42	4.328947	1
	1.32%	3.95%	10.53%	28.95%	55.26%		
Unpleasant and tedious	33	29	4	6	4	1.934211	3
	43.42%	38.16%	5.26%	7.89%	5.26%		

Parameters	1	2	3	4	5	Weighted Score	Mean Score
Hoping to get faster tax refund	14	27	31	3	1	2.342105	4
	18.42%	35.53%	40.79%	3.95%	1.32%		
Convenience	1	3	8	22	42	4.328947	1
	1.32%	3.95%	10.53%	28.95%	55.27%		
Speed of filing	2	4	14	19	37	4.118421	2
	2.63%	5.26%	18.42%	25.00%	48.68%		
To gain experience	0	7	15	22	32	4.039474	3
	0.00%	9.21%	19.74%	28.95%	42.11%		

With regards to reason for using e-file, 84.22% of the e-filers are agree that they choose e-filing over manual filing for convenience and 73.68% of the e-filers are agree that they choose e-filing for speed, while 5.27% of e-filers were hoping to get faster returns. Overall, it can be concluded from the survey results that on of the most important reasons for e-filing is convenience followed by speed. The overall experience of e-filers is summarized in the following table.

**Table 4 Overall experience of filing e-returns**

From the above table it can be concluded that more than 83% of the e-filers agree to the fact that e-filing is Convenient & easy to use. 13% of e-filers feels that e-filing is Unpleasant and tedious.

**Profile of non e-filers:** Out of those who file their return personally (i.e. 229 respondents) only 76 respondents are e-filers and remaining 153 are non e-filers. To explore further researcher have asked them the reason

**Table 5 Reasons for not using of e-filing**

Parameters	1	2	3	4	5	Weighted score	Mean Score
No computer and no internet access	59	41	28	14	11	2.196	6
	38.56	26.80	18.30	9.15	7.19		
Unsuccessful attempt to e-file	67	41	22	16	7	2.052	7
	43.79	26.80	14.38	10.46	4.58		
No incentive to use e-filing	34	31	29	26	33	2.954	3
	22.22	20.26	18.95	16.99	21.57		
Do not have digital certificate or PIN to do	11	14	18	53	57	3.856	2
	7.19	9.15	11.76	34.64	37.25		
Lack of experience and knowledge to e-file	9	11	23	48	62	3.953	1
	5.88	7.19	15.03	31.37	40.52		
E-filing is better than manual filing	64	37	21	18	13	2.209	5
	41.83	24.18	13.73	11.76	8.50		
Do not trust e-filing	53	39	24	21	16	2.399	4
	34.64	25.49	15.69	13.73	10.46		

for not using e-filing system. The following table represents the findings.

More than 72% of the non e-filers agree on the fact that they had no experience and knowledge of e-file, the second highest reason for not using e-filing is lack digital certificate/PIN required for e-file. About 62% of non e-filers disagree that they do not have computer and internet. These findings indicate that taxpayers have computers/internet, but they are not technology savvy. Around 15% of the non e-filers are agree upon the fact that they had attempted to use e-file but were unable to do it successfully. More than 60% of the non e-filers disagree on the fact that they do not have trust in e-file. To explore them further, researcher investigated them on the question what parameters/factors can influence/ motivate them to use e-file in future. The findings of this question are summarized in the below mentioned table. Faster tax return is one of the most influencing factors followed by extension of filing deadline for e-filers to motivate the non e-filers.

The difference between the mean score of the statements extension of filing deadline for e-filers and faster tax refund if use e-filing is insignificant, so tax authority can treat them as equal and most desirable incentive and decide their action accordingly. Surprisingly, less than 4% of the non e-filers suggested lucky draw and incentive in-kind.

**Inferential statistics**

**Hypothesis: - 1.** There is no difference between respondents with Gender and Risk Perceived. For this t-test was conducted, (0.064 > 0.05). Researchers can conclude that there is no difference between Gender and risk perceived means whether male or female

perceive the same level of risk while doing e-filing.

**Hypothesis:-2** There is no correlation between respondents Perceived Usefulness (Overall Performance Expectancy and behavior intent for e-filing. From the survey result, researcher rejected the H0, means there is correlation between that performance expectancy and Behavior intent for e-filing and degree of correlation reported is 0.548.

**Hypothesis:-3** There is no difference between respondents with different level of education with perceived risk. (PR).

**Hypothesis:-4** There is no difference between respondents with different level of education with Perceived ease of use (PEOU).

**Hypothesis:-5** There is no difference between respondents with different level of education with perceived usefulness. (PU). (The three hypotheses results are reported in single table.)

The above ANOVA test indicates that there is no difference between (1) respondents with different level of education with perceived risk. (PR), (2) respondents with different level of education with Perceived ease of use (PEOU) and (3) respondents with different level of education with perceived usefulness. (PU), as p>0.05.

**MAJOR FINDINGS**

There are four objectives of this research. Firstly, to know whether the tax payers feel easy to use e-filling system. Secondly, to investigate whether the tax payers have problems/facilities in using the e-filing system. Finally, to study the perception of taxpayers towards the e-filing. More than 83% of the e-filers agree to the fact that e-filing is Convenient & easy to

**Table 6 Factors that motivates for the use of e-filing**

Parameters	1	2	3	4	5	Weighted score	Mean Score
Extension of filing deadline for e-filers	7	3	33	42	68	4.052	2
	4.58%	1.96%	21.57%	27.45%	44.44%		
Faster tax refund if use e-filing	3	2	29	44	75	4.216	1
	1.96%	1.31%	18.95%	28.76%	49.02%		
Special cash rebate for e-filers	61	53	27	7	5	1.967	4
	39.87%	34.64%	17.65%	4.58%	3.27%		
Lucky draw prize for e-filers	61	45	40	4	3	1.974	3
	39.87%	29.41%	26.14%	2.615%	1.96%		
Incentive in-kind (voucher, coupons)	69	35	43	4	2	1.922	5
	45.10%	22.88%	28.10%	2.61%	1.31%		

**Table 7 ANOVA-Level of education and PR, PEOU and PU**

Dimensions	F calc.	Sig.	Result	Hypothesis
Using e-Filing system, I will lose control over the privacy of my personal information	2.269	0.063	0.063>0.05	Don't reject H <sub>0</sub>
Using e-Filing system will expose me to hackers.	1.704	0.151	0.151>0.05	Don't reject H <sub>0</sub>
E-Filing system doesn't have security strong enough to protect my account	1.428	0.226	0.226>0.05	Don't reject H <sub>0</sub>
It is easy for me to learn the usage of e-filing system	1.918	0.109	0.109>0.05	Don't reject H <sub>0</sub>
It is easy to find information required for e-filing	0.429	0.788	0.788>0.05	Don't reject H <sub>0</sub>
It is overall easy for me to e-file	0.182	0.749	0.749>0.05	Don't reject H <sub>0</sub>
E-filing system will improve my performance	1.195	0.314	0.314>0.05	Don't reject H <sub>0</sub>
E-filing system will improve my productivity	1.100	0.358	0.358>0.05	Don't reject H <sub>0</sub>
E-filing system will enhance my effectiveness	1.908	0.111	0.111>0.05	Don't reject H <sub>0</sub>
E-filing will help me better manage my returns by providing access to previous year's returns	1.297	0.273	0.273>0.05	Don't reject H <sub>0</sub>

use, while more than 71% of the e-filers agree to the fact that e-filing is Good and pleasant. Only, 13% of e-filers feels that e-filing is Unpleasant and tedious. That who uses the e-filing system they feels it is easy. With regard to second objective, it can be concluded that about 62% of non e-filers disagree that they do not have computer and internet. These findings indicate that taxpayers have computers/internet, but they are not technology savvy. Around 15% of the non e-filers are agree upon the fact that they had attempted to use e-file but were unable to do it successfully. More than 72% of the non e-filers agree on the fact id that they had no experience and knowledge of e-file, the second highest reason for not using e-filing is lack digital certificate /PIN required for e-file. So, e-filers they have problems with technology and not with the resources. From the survey result it can be said that most of the tax payers; have the positive perception on e-filing system. A majority of the tax payers have own enough facility to use e-Filing system at home or at the workplace.

### LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

Few limitations must be acknowledged that suggest caution in generalization. The present study is based on a moderate sample size and area covered are Bhiwani and Sirsa therefore the results of this study cannot be generalized. Future research could examine a wider respondent base across the cities of Haryana state with more diversified sample. In this study Unified Theory of Acceptance and Use of Technology (UTAUT) scale was used. Comparison of various scales was not attempted.

### CONCLUSION AND IMPLICATIONS

Taxpayers should be encouraged to use e-filing as there are many benefits of this system (both to government and to Taxpayers). There has been extensive advertisement in national news papers; this can be extended to local news papers and using radio stations and local channels thru local languages. The awareness can be best spread by introducing the e-filing in the high school or college curriculum. The awareness can be increased by organizing awareness programs in offices/workplaces. For the older generation who are hesitant to technology, the e-filing can influence by organizing awareness camps to ensure that the effort expectancy, system expertise. Thus, the tax authorities should have to develop marketing strategies to reduce and resolve the e-filing related issues.

### REFERENCES

- Aboelmaged, M. G (2010) "Predicting e-procurement adoption in a developing country: An empirical integration of technology acceptance model and theory of planned behaviour", *Industrial Management & Data Systems*, Vol. 110 Issue: 3, pp.392 – 414
- Amitabh Ojha, G. S (2009) "Antecedents of paperless income tax filing by young professionals in India: an exploratory study", *Transforming Government: People, Process and Policy*, Vol. 3 Issue: 1, pp.65 – 90
- Chau, P.Y.K. and Hu, P.J.H. (2001). "Information Technology Acceptance by Individual Professional: A Model Comparison Approach", *Decision Science*, 32(4): 699-719.

- Dabholkar, P. A. (1994), "Incorporating Choice In to an Attitudinal Framework: Analyzing Model of Mental Comparison Process", *Journal of Consumer Research*, 21: 100-118.
- Davis, F. D. (1989), "Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology", *MIS Quarterly*, 13(3): 319-318.
- Davis, F. D. (1993), "User Acceptance of Information Technology: System characteristics, user perceptions and behavioral impacts", *International Journal of Man-Machine Studies*, 38: 475-487.
- Davis, F.D., Bagozzi, R. P., and Warshaw, P. R. (1989), "User Acceptance of Computer Technology: A comparison of two theoretical models", *Management Science*, 35 (8): 982-1003.
- Erard, B. (1993), "Taxation with representation: An analysis of the role of tax practitioners in tax compliance", *Journal of Public Economics*, 52:163-197.
- Fishbein, M., and Ajzen, I. (1975), *Belief, Attitude, Intention and Behaviour: An introduction to theory and research*, Reading, MA: Addison Wesley.
- Jackson, C. M., Chow, S., and Leith, R. A. (1997). "Toward an Understanding of the Behavioural Intention to Use an Information System", *Decision Sciences*, 28(2): 357-389.
- Kahan, S. (1998), "Is Widespread E-filing Inevitable?" *The Practical Accountant*, 31(11): 22-29.
- Kun Chang Lee, M. K (2008) "User evaluations of tax filing web sites: A comparative study of South Korea and Turkey", *Online Information Review*, Vol. 32 Issue: 6, pp.842 – 859
- Lai, M. and K. Choong, 2010. Motivators, Barriers and Concerns in Adoption of Electronic Filing System: Survey Evidence from Malaysian Professional Accountants. *Am. J. Applied Science*, 7: 562-567.
- Lee, E. (2002), "Merge, Acquire and Prosper", *Akauntan National (the Journal of Malaysian Institute of Accountants)*, 15(6): 12-17.
- Legris, P., Ingham, J., and Collette, P. (2003), "Why Do People Use Information Technology? A Critical Review of the Technology Acceptance Model", *Information and Management*, 40: 191-204.
- Lemuria Carter, L. C (2011) "The role of security and trust in the adoption of online tax filing", *Transforming Government: People, Process and Policy*, Vol. 5 Iss: 4, pp.303 – 318
- Mick, D. G., and Fournier, S. (1998), "Paradoxes of Technology: Consumer cognizance, emotions and coping strategies", *Journal of Consumer Research*, 25(2): 123-143.

# STATUS OF MICROFINANCE IN RAJASTHAN WITH SPECIAL EMPHASIS ON SHG-BLP MODEL

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**Abstract:** Rajasthan is the largest state in India in terms of area. Most of its population resides in rural areas and is dependent on agriculture and allied activities for livelihood. Microfinance in Rajasthan is synonymous with Self-Help Groups (SHGs). These groups are further supported by banks through the Self Help Group- Bank Linkage Programme initiated by NABARD (SHG-BLP). A vast network of Commercial Banks, Regional Rural Banks and Co-operative Banks are providing credit to these groups in rural as well as urban areas. This paper analyses the role of these banks in promoting SHGs. Through the data collected on various aspects such as amount of savings of SHGs with various banks, loans disbursed etc. efforts have been made to determine the reach and performance of these institutions in meeting the ultimate objective of financial inclusion. Through this study the researchers have also tried to find out the current status of microfinance in Rajasthan.

**Key words:** Microfinance, Self Help Groups (SHGs), NABARD, Commercial Banks, Regional Rural Banks (RRBs), Co-operative Banks.

## INTRODUCTION

Microfinance is an economic development tool whose objective is to assist the poor to work their way out of poverty. It covers a range of services, which include, in addition to the provision of credit, many other services such as savings, insurance, money transfers, counselling, etc. The role prescribed for financial sector in India to achieve developmental goals dates to pre independence days. The agriculture credit department was set up in 1935 by the Reserve Bank of India to promote rural credit. In its early days, the government of India sought to promote rural credit by strengthening the cooperative institutions. The need to replace costly informal credit with institutional credit was strongly felt as the All India Rural Credit Survey report of 1954 found that informal sources accounted for 70% of rural credit usage, followed by cooperatives (6.4%) and commercial banks (0.9%). The "Lead Bank Scheme" was introduced in 1969, thereby starting a process of district credit plans and coordination among the different financial intermediaries. The same year

also saw the nationalization of fourteen commercial banks. As a result of these initiatives, the share of formal financial sector in total rural credit usage rose to 30% in 1971. The Regional Rural Banks (RRBs) were conceptualized in 1975 to augment the delivery of financial services in rural areas. This resulted in the creation of a network of banks, which is one of the largest in the world even today. The government initiated the Integrated Rural Development Programme (IRDP) in 1980-81. The objective of IRDP was to direct subsidized loans to poor self-employed people through the banking sector. The National Bank for Agriculture and Rural Development (NABARD) was established in 1982. In the same year the government established Development of Women and Children in Rural Areas (DWARCA) scheme as a part of IRDP. It was around this time that the first Self Help Groups (SHGs) started emerging in the country mostly as a result of NGO activities. The NGO MYRADA was one of the pioneers of the concept of SHGs in India. It was in 1984-85, when MYRADA started linking SHGs to banks. These SHGs were large enough for the bank to

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have transactions. The SHGs in turn were also very responsive and flexible to the needs of their members. While MYRADA did not directly intervene in the credit market for the poor, it facilitated "banking with micro institutions established and controlled by the poor". The SHGs were a step in that direction. Thus, seeds were sown for the modern microfinance sector in India to emerge. IRDP is estimated to have reached over 55 million poor families until 1999, when it was transformed into Swarnajyanti Gram Swarozgar Yojna (SGSY). The IRDP, in spite of its immense outreach, experienced very low repayment rates and created 40 million defaulters, which coupled with the subsidy component, ruled out long-term sustainability of the programme. Financial services, were thus, viewed as a social obligation. Given the high rates of default, a formal loan waiver was announced by the government in the year 1989. This had a negative impact on credit discipline, and reinforced the view that lending to the poor was not a profitable business among the mainstream financial institutions.

In the year 1991, India faced a balance of payment crisis. India's foreign reserve fell to a very low level and the country's ability to meet foreign debt obligations was seriously impaired. This, however, propelled the government into introducing structural changes in the economy-commonly referred to as the Economic Reforms of 1991. This gradually resulted in greater autonomy to the financial sector. As a result, new generation private sector banks such as UTI Bank, ICICI Bank, IDBI Bank (all established in 1994) and HDFC Bank (early 1995), emerged. The Narsimhan Committee report of 1991 also recommended phasing out of interest rate concessions. At the same time the Brahm Prakash Committee recommended reducing state involvement in cooperative banks.

The SHG – Bank linkage programme was formally launched by the NABARD in the year 1992, with it circulating guidelines to banks for financing Self Help Groups (SHGs) under a Pilot Project that aimed at financing 500 SHGs across the country through the banking system. While, the banks had financed about 600 SHGs by March 1993, they continued to finance more and more SHGs in the coming years. This encouraged the Reserve Bank of India (RBI) to include financing to SHGs as a mainstream activity of banks under their priority sector lending in 1996. The Government of India bestowed national priority to the programme through its recognition of microfinance and it found a mention in the Union Budget of 1999. The banking system comprising public and private sector commercial banks, regional rural banks and cooperative banks has joined hands with several

organizations in the formal and non-formal sectors to use this delivery mechanism for providing financial services to a large number of poor.

The year 2004 saw some very important development in the microfinance sector in India. The banking sector led by ICICI bank showed interest in microfinance as a viable commercial opportunity. ICICI Bank has taken a lead in establishing federations, co-operatives in their varied forms, credit unions, public and private innovative partnerships with microfinance institutions that will allow for risk sharing between the two. ICICI bank has also securitized the microfinance portfolio of Share and Basix, and has potentially opened the doors of capital markets for the microfinance sector.

In India, the micro finance movement has almost assumed the shape of an industry, embracing thousands of NGOs/MFIs, community-based self-help groups and their banks. During the last decade, the sector has witnessed a sharp growth with the emergence of a number of Micro Finance Institutions (MFIs) that are providing financial and non-financial support to the poor in an effort to lift them out of poverty. The MFI channel of credit delivery, coupled with the national level programme of SHG-Bank Linkage, today, reaches out to millions of poor across the country.

### SHG-BLP MODEL

This model was structured with the prime objective of providing financial services to the underprivileged in a sustainable manner. It was observed that the poor tend to come together in a variety of informal ways for pooling their savings and giving small-unsecured loans at different interest rates to their group members to meet varying financial needs. Under this model small cohesive groups of economically backward people are formed. They are encouraged to pool their savings, however small, and to loan it on interest to needy group members. Banks also provide loans to these groups if needed. For the banks it is safer to lend to a group as the transaction costs and risk associated regarding repayment go down as the group gives collective guarantee of repayment. The SHG – Bank Linkage Programme was started as an Action Research Project in 1989, which was the offshoot of a NABARD initiative during 1987 through sanctioning Rs. 10 lakh to MYRADA as seed money assistance for experimenting Credit Management Groups. In the same year the Ministry of Rural Development provided PRADAN with support to establish self-help groups in Rajasthan. The experiences of these early efforts led to the approval of a pilot project by NABARD in 1992. The pilot project was designed as a partnership



model between three agencies, viz., the SHGs, banks and NGOs. A working group reviewed this in 1995 that led to the evolution of a streamlined set of RBI approved guidelines to banks to enable SHGs to open bank accounts, based on a simple "inter se" agreement. This was coupled with a commitment by NABARD to provide refinance and promotional support to banks for the SHG - Bank Linkage Programme. Presently there are 8 million SHGs with thrift and deposits of about INR 1,336,914 million, annual loan off take of INR 3,72,869 million and loan outstanding of nearly INR 5,71,192 million.

### Reasons for the success of this Programme

- Reduced the incidence of poverty through increase in income, and also enabled the poor to build assets and thereby reduce their vulnerability.
- Enabled households that have access to it to spend more on education than non-client households. Families participating in the programme have reported better school attendance and lower dropout rates.
- Empowered women by enhancing their contribution to household income, increasing the value of their assets and generally by giving them better control over decisions that affect their lives.
- Reduced child mortality, improved maternal health and the ability of the poor to combat disease through better nutrition, housing and health - especially among women and children.
- Contributed to a reduced dependency on informal money lenders and other non-institutional sources.
- Facilitated significant research into the provision of financial services for the poor and helped in building "capacity" at the SHG level.
- Finally, it has offered space for different stakeholders to innovate, learn and replicate. As a result, some NGOs have added micro-insurance products to their portfolios, a couple of SHG federations have experimented with undertaking livelihood activities and grain banks have been successfully built into the SHG model in the Eastern Region. SHGs in some areas have employed local accountants for keeping their books, and IT applications are now being explored by almost all for better management information systems (MIS), accounting and internal controls.

The above graph represents three year data pertaining to the number of SHGs with saving linkage, amount of savings outstanding, number of SHGs disbursed with loans and credit disbursed every year. It also

**Table 1:** Progress of SHG BLP in India

(No. in Lakh and Amount in Rs'000 crore)

Description	2013-14	2014-15	2015-16
No. of SHGs with Saving Linkage	74.3	76.97	79.03
Amount of Savings Outstanding	9.9	11.06	13.69
No. of SHGs Disbursed with loan	13.65	16.26	18.32
Amount of Loan Disbursed	24.02	27.58	37.29
No. of SHGs with loan Outstanding	41.97	44.68	46.73
Amount of loan Outstanding	42.93	51.55	57.12

represents the number of SHGs with loan outstanding and the amount of loan outstanding. It is clearly evident from the figure that this programme is showing positive growth.

### Review of Literature

A number of literatures are available on the impact of microfinance on the lives of economically backward strata of the society and how the various financial institutions are doing their bit by promoting SHGs. But most of the studies focus on states like Andhra Pradesh, Tamil Nadu, West Bengal and Gujarat. This does not mean that there is no or very less activity in other states especially Rajasthan. It is just that work here has not been duly recognized. Some of the relevant works are discussed below:

Ahmad (1999) through a case study on Thrift Groups in Assam highlighted that women are coming to the administration directly for their just rights and to address their grievances boldly. It proved that Self Help Groups are successful in North East India even in the midst of insurgency.

Puhazhendhi (1999) analyzed the functioning of SHG's, performance, sustainability, empowerment of women, economic impact on the members, future potentials etc. He observed that SHG's in Tamil Nadu are performing well towards social change and transformation.

Datta and Raman (2000) highlighted that SHG's are characterized by heterogeneity in terms of social and economic indicators. The success of SHG's in terms of high repayment is mostly related to the exploitation of prevailing social ties and cohesion found among women members. Social cohesiveness among members spring not only from their diverse background of knowledge base, skills occupations and income levels, but also due to the dynamic incentive system of progressive lending to the groups on the successful completion of loan repayment.

Satish (2001) in his paper raised certain issues related

to the functioning of SHG's. Adequate care should be taken to ensure homogeneity of socio-economic status of the members, while forming SHG's. The process of SHG formation has to be systematic whether a Bank or an NGO forms it. He emphasized that SHG's experiment has to be spread throughout rural India rather than being concentrated in a few pockets of the country.

S. Barbara and R. Mahanta (2001) in their paper maintained that the SHG's have helped to set up a number of micro-enterprises for income generation. Rastriya Gramin Vikas Nidhi's credit and saving programme in Assam has been found successful as its focus is exclusively on the rural poor. It adopted a credit delivery system designed especially for them with the support of a specially trained staff and a supportive policy with no political intervention at any stage in the implementation of the programme.

N. Manimekalai and Rajeshwari (2001) in their paper highlighted that the provision of micro-finance by the NGO's to women SHG's has helped the groups to achieve a measure of economic and social empowerment.

Veena Kumari (2010) conducted a research on Women Empowerment and Development through Micro Finance in India to study relationship between microfinance availability and economic development and to measure women empowerment through microfinance which suggests that microfinance institutions and SHGs are new means to reduce the poverty in general and empowerment of women in particular.

Sarumathi, K. Mohan (2011) explored the role of microfinance in empowering women in the Pondicherry region. The main objectives of the study were to understand the performance of SHG's in Pondicherry region, to analyse the freedom women members get in SHG's, the problems women members face in SHG's and to offer suggestions for the betterment of women. The study concludes that microfinance has brought psychological and social empowerment more than economic empowerment.

Jain, Dheeraj and Jain, Bhagyashree (2012) conducted an empirical study on the role of microfinance in the upliftment of women in the Udaipur district of Rajasthan. They concluded that there is a significant increase in women empowerment of the Self Help Groups members. However, social backwardness, indebtedness and presence of other microcredit programs in the same or nearby villages have a significant positive influence on women's participation in this program.

Chippa, Dubey and Sharma (2014) have made an effort to study the impact of microfinance on women empowerment, poverty alleviation and employment security in rural areas of Rajasthan. Their work is primarily based on secondary sources. They have concluded that community based approach of microfinance and livelihood has high impact whereas MFI model has not impacted poverty to that extent.

Gundappa (2014) has undertaken an in depth study and concluded that Microfinance program is one of the most important programs in India as developing countries are facing initial capital problem for investment. Micro Finance system is providing financial facility through SHGs. The results of his study show that such programs are growing through Commercial Banks, Co-operative Banks and Regional Rural Banks with the help of NABARD. Commercial Banks are playing vital role in providing loan facilities to SHGs through SHG-Bank Linkage Programs in India.

Ansari, Moazzam and Rehman (2015) have concluded that microfinance brings about changes in women's lives: household condition, family wellbeing and social status. It is improved by availing the services of microfinance institution and interest free loans further add to their well-being.

While reviewing literature it was observed that most of the studies conducted were qualitative in nature as they focussed more on how the life of SHG's members has changed post microfinance socioeconomically. To what extent it has improved the status of women within the family and in the society at large. This paper focuses more on the quantitative aspects. How the various banks have played a crucial role in promoting SHGs and how much they have succeeded in improving the accessibility of funds to the economically weaker sections.

## Demographic profile of Rajasthan

Rajasthan is the largest state in India. It is located in the north-western part of the subcontinent. It is bounded on the west and northwest by Pakistan, on the north and northeast by the states of Punjab, Haryana, and Uttar Pradesh, on the east and southeast by the states of Uttar Pradesh and Madhya Pradesh, and on the southwest by the state of Gujarat. The state has an area of 132,140 square miles (342,239 square kilometers). Rajasthan has diverse natural, social and economic features. The climatic conditions also vary within the state. The western Rajasthan is relatively dry and infertile. The southwestern part is comparatively wetter, hilly and more fertile. The amount of rainfall also varies significantly within the state with the

average rainfall in western area about 100 mm annually while the southeastern part receives about 650 mm annually. Hence the economic conditions also vary greatly. The population data is as follows:

**Table-2: Demographic Profile**

Description	Population		Literacy	
	Rural	Urban	Rural	Urban
Total	51,500,352	17,048,085	26,471,786	11,803,496
Male	26,641,747	8,909,250	16,904,589	6,783,823
Female	24,858,605	8,138,835	9,567,197	5,019,673

Source: Census report 2011 and [www.rajasthan.gov.in](http://www.rajasthan.gov.in)

It is evident that more than 75% of the population resides in rural areas. The male female ration in rural areas is 1.0717 and in urban areas it is slightly higher at 1.094. When we look into the literacy figures, it can be observed that males are more literate in both rural and urban areas. The male female literacy ratio in rural areas is 1.76 and in urban areas it is, not surprisingly, narrower i.e. 1.35.

The main occupation of the people in Rajasthan is agriculture as majority of population resides in villages. But even the farmers cannot rely completely on the agricultural produce as a means of living as 33% of the crops fail even after sufficient rainfall. Besides agriculture the other main source of livelihood for rural people is animal husbandry. Animal husbandry has become popular due to the difficult farming conditions. At present, there are ten times more animals per person in Rajasthan than the national average, and overgrazing is also a factor affecting climatic and drought conditions. Barmer district has the highest cattle population out of which sheep and goats are in majority. That region of Rajasthan is the biggest wool-producing area in India. The sheep-wool from Rajasthan is considered best for carpet making industry in the world. Bikaner is the biggest mandi of wool in Asia.

#### MICROFINANCE MOVEMENT IN RAJASTHAN

Progress of a region largely depends on its socio economic characteristics. For a region to flourish it is imperative that equal opportunities given to both males and females to become economically independent.

In Rajasthan, micro finance is almost synonymous with Self Help Groups. There is no other model in the state. There are approximately 1.5 lakh Self Help Groups of women. Department of women and child development has promoted about 50% of these groups. Other government departments under developmental schemes like SGSY, Watershed Development etc.,

have organized the other 20-25% groups. NGOs have promoted remaining 25-30% groups.

The Self Help Movement started more as 'social mobilisation' of women for their better place in family and society rather than 'microfinance movement' in Rajasthan. Many voluntary organisations had been working with poor organising them in 'village development committees'. But participation of women in these VDCs was sub optimal. So they started a separate group of women 'Mahila Smooch/ or Mahila Mandals' as sub set of larger village institution purely with a purpose of having increased participation of women in development.

Most development practitioners and policy makers realized that mere women participation through MM/ MS is not adequate and some direct action in terms of improving economic status of women is needed. The assumption was that if women have access to income/ money, their status in family and society would be better. Many voluntary organisations and government (together and/or separately) started organising women in to groups to take up small business collectively. Most of these activities were Off-Farm like sewing, dari, galicha, candle, chalk, agarbatti, achar, badi, papad, handicrafts;etc. But due to lack of proper marketing networks and many other reasons, there was mixed experience. Except some success stories at highly micro level, there was no significant impact.

#### SHG- BLP model in Rajasthan

In order to assess the performance of SHG-BLP model two year data has been taken into consideration. The banks are giving the much needed impetus to the mission of financial inclusion by making credit cheaper and easier there by contributing their part in poverty alleviation and rural empowerment.

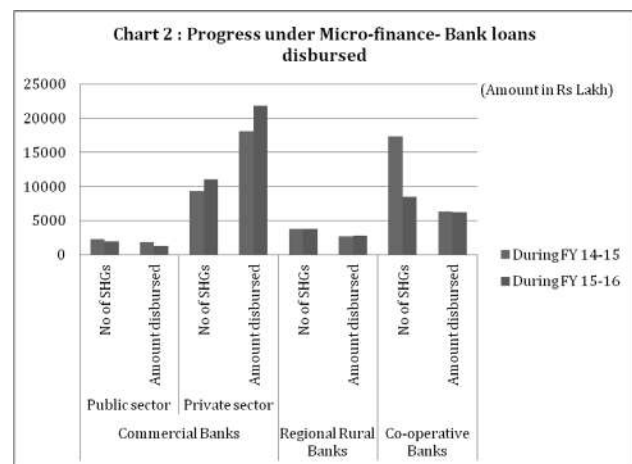
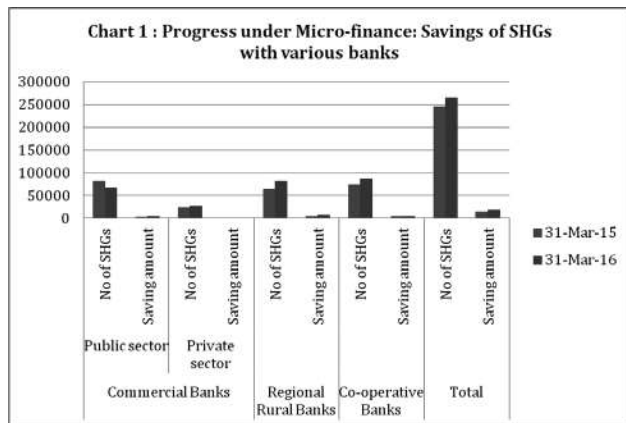
The above graph shows that overall the number of SHGs with savings in Commercial banks has decreased in the FY16 as compared to FY15. But the number of SHGs with savings in Private Sector Banks has increased. This implies that the number of SHGs saving with Public Sector banks has gone down. The overall savings with Commercial banks has increased. The number of SHGs as well as the amount of savings with Regional Rural Banks and Co-operative Banks has gone up. Overall the number of SHGs associated and the amount saved with banks has increased in the FY-16 as compared to FY-15.

The above chart represents the amount of loan disbursed by various banks and the number of SHGs that have benefitted with the loan. It is evident that the number of SHGs that has been disbursed loans

**Table-3:** Saving of SHGs with various banks

(Amount in Lakhs)

	Commercial Banks				Regional Rural Banks		Co-operative Banks		Total	
	Public sector		Private sector		No of SHGs	Saving amount	No of SHGs	Saving amount	No of SHGs	Saving amount
	No of SHGs	Saving amount	No of SHGs	Saving amount						
31-Mar-15	82941	3593.16	23855	2096.35	64602	4569.51	74505	4120.41	245903	14379.43
31-Mar-16	66917	4865.3	27793	1673.62	81882	7098.37	87527	5021.77	264119	18659.06



**Table-4:** Bank loans disbursed

(Amount in Lakhs)

	Commercial Banks				Regional Rural Banks		Co-operative Banks		Total	
	Public sector		Private sector		No of SHGs	Amount disbursed	No of SHGs	Amount disbursed	No of SHGs	Amount disbursed
	No of SHGs	Amount disbursed	No of SHGs	Amount disbursed						
During FY 14-15	2228	1824.11	9310	18063.41	3735	2744.18	17317	6289.1	32590	28920.8
During FY 15-16	1938	1330.83	10994	21808.29	3816	2841.57	8502	6196.5	25250	32177.19

by Public Sector Banks has gone down. The total amount disbursed has also gone down as compared to previous year. The Private Sector Banks have shown considerable progress with both the number of SHGs associated as well as the amount disbursed increasing in FY-16. The RRBs have shown slightly better progress. When we consider the case of Co-operative banks the number of SHGs that have been given loans has gone up but the total amount of loan does not show any significant difference.

This chart represents the amount of loan outstanding with various banks and the number of SHGs who had taken the loan. It can be observed that the number of

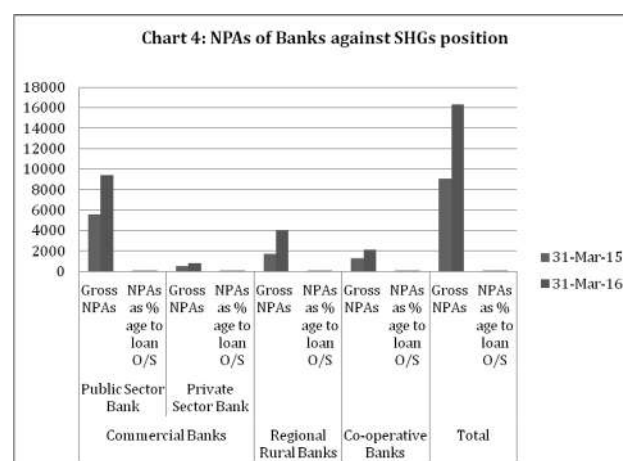
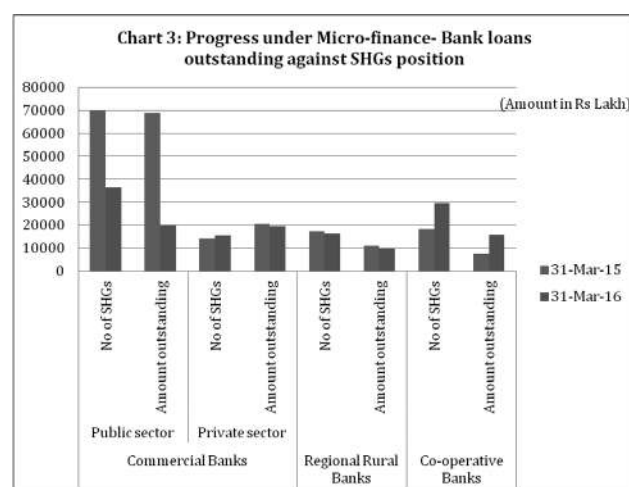
SHGs with loan outstanding has decreased for Public Sector Banks in the FY-16. The loan outstanding amount has also decreased. For the Private Banks the number of SHGs with loan outstanding as well as the amount of loan outstanding has gone up. The Regional Rural Banks have fared much better on this front with the number of groups and the amount of loan outstanding, both gone down in the FY-16. But the Co-operative Banks have performed poorly with the number of SHGs with loan outstanding as well as the amount of loan outstanding rising in the year FY-16.

The above data shows that the total Gross NPA of Banks has risen significantly during FY2016. It was

**Table-5: Bank loans outstanding against SHGs position**

(Amount in Lakhs)

	Commercial Banks				Regional Rural Banks		Co-operative Banks		Total	
	Public sector		Private sector		No of SHGs	Amount out-standing	No of SHGs	Amount out-standing	No of SHGs	Amount out-standing
	No of SHGs	Amount out-standing	No of SHGs	Amount out-standing						
<b>31-Mar-15</b>	69872	68776.19	14148	20595.06	17422	11118.33	18165	7529.47	<b>119607</b>	<b>108019.05</b>
<b>31-Mar-16</b>	36578	20087.22	15498	19414.91	16536	9859.54	29495	15821.39	<b>98107</b>	<b>65183.06</b>


**Table-6: NP As of Banks against SHGs position**

(Amount in Lakhs)

	Commercial Banks				Regional Rural Banks		Co-operative Banks		Total	
	Public sector		Private sector		Gross NPAs	NPAs as % age to loan O/S	Gross NPAs	NPAs as % age to loan O/S	Gross NPAs	NPAs as % age to loan O/S
	Gross NPAs	NPAs as % age to loan O/S	Gross NPAs	NPAs as % age to loan O/S						
<b>31-Mar-15</b>	5610.86	8.16%	467.02	2.27%	1727.51	15.54%	1256.59	16.69%	<b>9061.98</b>	<b>8.39%</b>
<b>31-Mar-16</b>	9366.71	46.63%	805.25	4.15%	4042.2	41%	2134.54	13.49%	<b>16348.7</b>	<b>25.08%</b>

just 8.39% of loan outstanding at the end of FY2015 but reached the level of 25.08% at the end of FY2016.

Analysis of bank-wise data shows that the Gross NPAs of all banks have increased except for the Co-operative Banks. This implies that the Co-operative Banks have better engagement with SHGs in terms of loan recovery. Performance of the Public Sector banks has been most disappointing as these banks recorded the maximum increase in Gross NPAs as well as %age of NPAs in relation to loan outstanding.

### Conclusion and Suggestions

The overall SHG-BLP programme has shown good progress in Rajasthan as the total number of SHGs

and their savings with banks has been increasing in recent years and commercial banks by virtue of their vast network are leading. Though, the reach of Public Sector Banks is wider, the Private Sector banks are making more efforts to earn the trust of SHGs. The Regional Rural banks and Co-operative banks have shown growth in terms of SHGs savings and loans disbursement amount. However these figures are not very much encouraging. The amount of loan outstanding with banks is more for Private Sector and Co-operative Banks. This shows that these institutions have disbursed loans without proper due diligence. Overall the total loan outstanding has decreased. We can say that SHGs have managed to fulfil their

financial needs and could also make some profit over their investments. However the shocking figure of NPAs against the total loan outstanding shows weakness in credit rating, absence of proper follow up and monitoring on the part of banks. The researchers would like to make the following suggestions for making SHG-BLP more effective in Rajasthan:

- As 2/3<sup>rd</sup> of the population resides in rural areas, village level interaction programs should be organised between the SHGs and banks. These would lead to increased credit flow and appreciation of each other's needs. Such programs can also be used to make the villagers understand the basics of finance and accounts.
- The banks can organise skill development workshops on a regular basis to improve the employability and enhance the productivity of SHG members.
- The banks should monitor the activities of the SHG promoted with the help of associated NGO. These NGOs can help in credit rating and loan repayment follow ups.
- The banks can use technology to develop innovative methods for capturing field data, making appraisal faster, monitoring of bank accounts and tracking loan repayments.
- The concept of SHG-BCs (Self Help Group-Business Correspondents) needs to be introduced in Rajasthan also. These BCs can act as intermediaries between the SHG members and the associated bank. A lot of field work can be delegated to these correspondents there by saving the time and cost of banks.

## References

- Chipa, M.L., Dubey, R.K. & Sharma, S, (2014), 'Impact of Microfinance on women empowerment, poverty alleviation and employment security in rural areas of Rajasthan', *International Journal of Innovative Research in Science, Engineering and Technology*, Vol.3, issue: 2.
- Mary, S. & Swaminathan, S., (2012), 'Women empowerment through Self Help Groups: Analysis of comparative experiences in Maharashtra and Tamil Nadu', *International Journal of Social Science*, Vol.2, issue: 3.
- Mayox, L. (2000), "Microfinance and the empowerment of Women. A review of the key issues" Social finance unit working paper, 23. Geneva: ILO
- Mohan, K., & Sarumathi, S. (2011), 'Role of Microfinance in Women's Empowerment', *Journal of Management and Science*, Vol.1, No.1.
- NABARD (2015), 'The status of Microfinance in India', National Bank for Agriculture and Rural Development, Mumbai.
- NABARD (2016), 'The Status Of microfinance in India', National Bank for Agriculture and Rural Development, Mumbai.
- Puhazhendhi, V., & Badatya, K.C. (2002), 'SHG-Bank Linkage programme for rural poor in India An Impact assessment', NABARD, Mumbai
- Puhazhendhi, V., & Satyasai, K.J.S. (2000) Micro Finance for Rural People An impact evaluation, NABARD, Mumbai
- Sureshraj, S.G., & Uma Priyadarshini, S. (2013), 'An Empirical study on Women's empowerment through Microfinance', *Paripex-Indian journal of research*, Vol.2, issue: 4.
- [www.microfinanceinfo.com](http://www.microfinanceinfo.com)
- [www.rajasthan.gov.in](http://www.rajasthan.gov.in)
- [www.rbi.org.in](http://www.rbi.org.in)
- [www.sidbi.com](http://www.sidbi.com)
- [www.microworld.org](http://www.microworld.org)
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# BIG DATA ANALYTICS: AN IMPERATIVE FOR BUSINESS DECISIONS

Rajesh Bajaj\*

**Abstract:** With globalization of the markets and customers, the business environment is changing very fast. Various disciplines of the business viz. market identification till servicing of the markets, along with all the intermediary stages of the business management i.e. from product design & development needs, production and supplies to markets and related supply chain management, have become highly competitive. There is very high level of risk associated with business operations. Under these circumstances, business decisions have very little scope to go wrong. High degree of accuracy demanded by today's business needs state of the Art technology for carrying out in depth analysis using the long stream of past and predictive data for the future. This necessitates the application of Big Data Analytics for strategic and functional business planning, an inescapable requirement. Fortunately, technological developments in the field of Big Data Analytics have been a savior in this situation.

**Keywords:** Analytics, The Big Data, Decision Management, Knowledge Management, Social Data, Predictive Analytics, Business Intelligence.

## Introduction

Soundness of any business decision is highly dependent upon quantum of back up information available, structured analysis of the information and application of results to formulate future plans and strategies. In competitive world of today, where business is highly risk prone; too much leverage is not available with business managers to make wrong decisions or linger on with decision making on time horizon. Speed and correctness of decisions are the buzzwords for succeeding in present day dog eat dog business environment. With globalization and economic liberalization, business reach has become unlimited. Under such complex environment, where business problems are multi dimensional, big data is used in many different parts of organizations to change decision-making process and the generation of data-driven insights. In today's world, we can harness data for information to help us make better and faster decisions across all industries in a variety of functions.

## Discussion

The business environment is changing very fast with increased connectivity and globalization. Required raw material can be procured at one location; manufactured at another and marketed else where. Virtually, it can be anywhere in the world. With more electronic channels available, large volumes of digital data is generated w.r.t suppliers, customers and with the social media being used for digital marketing purposes, one can gauge in real-time how the consumer taste is changing. But is this potential getting leveraged? No! such huge volumes of data cannot be analysed in real-time or near real time using conventional computing technology.

With over four billion camera phones, 30 billion RFID tags, over two billion people on net; handling data of such magnitude is a challenge for the IT industry. The question is: how do we turn 12 terabytes of tweets created each day into improved product sentiment analysis to convert 350 billion annual meter readings to better predict power consumption? Big Data is

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rather pervasive, touching all walks of life ranging from law enforcement and banking to healthcare and retail. Big Data is used across industries today for key applications. The industries wherein the value of big data can be leveraged are:

- Retail functions: Target segment identification, loyalty management
- Banking, Finance & Insurance: Stock market sentiment analysis, real time trading; Adherence to compliance and country regulations; Fraud management; forecast economic events; and many more.
- Manufacturing: Demand forecasting and Inventory management of large number of SKUs and trend analysis.
- Healthcare: Medical diagnostics, Genome mapping, drug discovery and recommendation systems
- Public Sector: Intelligence agencies to counter threats; real time multi modal surveillance in law enforcement
- Traffic management: Handling of traffic congestion in transportation;
- Media: Real time ad targeting in digital media; cyber security detection

With the pace of IT adoption across the lines of business and in the current era of internet of things with a variety of intelligent devices interconnected and unstructured data in real time, Big Data and analytics have become essential backbones for every industry. In today's dynamic environment, it is essential that organizations have the capability to handle these Big Data challenges. For instance, telecommunications, immigration and retail can leverage Big Data to minimize frauds. In short, the ability to handle Big Data has become necessity for the business as new business models evolve.

It is a known fact that Big Data proves fruitful in our dynamic business environment. Today, consumers looking for customer service have different expectations as opposed to the past. They may choose to interact with a company across different touch points; for example: phone calls, seek answers on the web, chat with a customer service agent on the website or go to social media page of the company. They want the company to have a contextual understanding of their relationship with the company and would like personalized interactions. To accomplish this, it is critical for us to leverage Big Data in order to be able to analyse interactions through these different channels and contextually derive the intent of the consumer and provide customized interface. As retailers evolve in their omnichannel journey, analytics-driven

differentiations are key to providing guests with relevant and personalized shopping experiences across physical, online and mobile channels. Big Data analysis opens new avenues that were difficult to accomplish before. 'Internet of things' is an emerging area that holds tremendous promise for the future.

However, the challenges in making companies big data – friendly are the volume of data and handling of the same. Also, the talent required to work in Big Data is hard to find and companies cannot recruit people with skills in traditional analytics. These analytics professionals need to have cross-functional skills ranging from data management / manipulation, machine learning and mathematical modeling. The aspirants seeking a career in this domain need to ask themselves, "Do I have the skill-sets in managing and building models with structured and unstructured data?" This requires very different skill-sets from conventional analytics. Major constraints in Big Data management are as follows:

- a) There exists a huge supply-demand gap;
- b) Interdisciplinary expertise is required;
- c) Limited knowledge of tools and techniques available;
- d) A lack of awareness about the benefits of big data;
- e) Slow adoption rate.

Human resources management teams are already data rich – they have a lot of data on things like staff turnover, recruitment channels, training and development, staff satisfaction and absenteeism. In addition to these traditional data sets, companies can now collect so much more data that wasn't available before, like:

- a) capturing employees on CCTV,
- b) Taking screenshots when staff are using company computers,
- c) Scanning social media data,
- d) Analyzing the content of emails,
- e) Monitor where they are using the data from geo-positioning sensors in corporate smart phones.

Even though HR teams already hold a lot of data, many fail to turn this data into valuable insights and ascent of big data together with the new possibilities of collecting and analyzing data won't make this any better. However, many Human Resource management teams are on the verge of leveraging data and analytics much better. Companies have the realization now that these are nothing without the right people. People with the right skills and talents make all the difference and will give companies the competitive edge they need to succeed today and in the future. It is therefore



absolutely vital that companies manage their people as best as they possibly can in order to e.g. find, recruit, retain and develop the right talent.

With almost every organization now focusing on data and analytics, there is tremendous demand for skilled talent in the industry. Staying current on evolving customer preferences and meeting their increasing expectations are also challenging. Maximum advantage can be derived across all departments such as operations, finance, sales, inventory, supply chain, transportation and more. Retail has been undergoing a massive transformation since the big wave of internet came into play, and the pace of change in retail has been accelerating ever since. The advent of digital technology, social networks, analytics and new devices has led to an omni - channel revolution.

The data and analytics revolution has some serious implication for how people management is done in companies. In order to stay on track companies must make sure that they have the right skills, capabilities and technology in place to leverage people data and analytics. There already is a global shortage of people with business analytics and data science skills, and this shortage is especially noticeable among HR teams. Big Data can make a real impact in the area of people management, but only if companies invest in building the big data and analytics skills and expertise now.

### Conclusions

One thing certain about data is that it will continue to grow. Terabytes are old news; now we're hearing about petabytes, zettabytes, and beyond. To succeed with Big Data, we can mine maximum value from our rapidly-expanding data by keeping following aspects in view:

a) Use one tool to analyze it all. Select a flexible

business intelligence (BI) solution, which can connect to multiple databases and file formats.

- b) Play to your natural strengths. The human eye's ability to quickly detect and understand patterns and anomalies is unsurpassed by technology.
- c) Free your data. Allow business users to answer questions on the fly while protecting the underlying data. Eliminate the queue for reporting with easy, intuitive, self-service BI.
- d) Cross the streams. Make sure your BI tool can blend data across multiple data sources to broaden your data view for richer insights.
- e) Remember: With great power comes great responsibility. Allow IT to manage data architecture, security, and access controls while still providing business users with the insight they need to answer their own questions.
- f) Organizations with big data are over 70 percent more likely than other organizations to have BI projects that are driven primarily by the business community, not by the IT group.

### References:

- Khanna P (2011), *How to run the world: Charting the course to the next renaissance*. Random House, NY.
- Kolb D.A. (1984), *Experiential Learning*, Prentice-Hall, Englewood Cliffs, NJ.
- Kets de Vries, M.F.R. (1993) *Leaders, fools & Imposters: essays on the psychology of leaders*. Jossey – Bass, San Francisco CA.
- The Economic Times, New Delhi, December 9, 2014; ET ascent
- How Big Data Will Change People Management Forever - [http://smartdatacollective.com/Big\\_Data\\_Guru/how-big-data-changing-people-management-forever](http://smartdatacollective.com/Big_Data_Guru/how-big-data-changing-people-management-forever).

# IMPACT OF CORPORATE SOCIAL RESPONSIBILITY ON CONSUMER TRUST

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**Abstract:** Over the past years, corporate social responsibility (CSR) has been a key focus for academics, professional & companies. This study seeks to examine perceived corporate social responsibility (CSR) with a focus on ethical and legal questions, related to customer trust and loyalty. An empirical test was conducted on Impact of Corporate Social Responsibility on Consumer Trust. Results indicate that perceived CSR has a significant impact on customer trust and loyalty. This study provides a theoretical implication for the relationship between perceived CSR and the customer trust & loyalty. Results show that consumers' perceptions of CSR activities have a positive influence on their trust toward the company, directly and indirectly through the influence on perceived quality of the products offered and consumer satisfaction.

**Keywords:** Corporate social responsibility, Customer trust, Customer loyalty

## Introduction

Over the years, industries, professional and researchers have intensified their hard work to explore ways to distinguish from their competitors. Quality management systems, product innovation or reengineering process systems are obvious examples of their hard work. However, these approaches have not given the likely results due largely to their focus on inner management. Currently, the efforts to achieve sustainable competitive advantage are based on the growth of customer-oriented management systems that enhance customer trust and commitment to the company, and accordingly customer loyalty and integrity.

It is within this new prototype of management with customers where we can place Corporate Social Responsibility (CSR) as an element to augment customer satisfaction through the strengthening of relational factors. In particular, socially responsible actions permit to obtain a higher level of commitment with customers and the society in general, as well as to amplify customer faith and reliance of the company, and as a result they reinforce the constructive aspects

of the purchase option. On the other hand, these options help to reduce the unconstructive aspects. That is to say, there are an increasing number of customers who rebuke the companies whose practices are not responsible. Therefore, the objective is to build up the company's reputation by basing this reputation on social values thus increasing customer satisfaction as well as increasing customer loyalty.

Over the past years, corporate social responsibility (CSR) has been a key focus for academics, professional & companies (Lombart and Louis, 2014). CSR is a worldwide concept, which refers to international standards, guidelines to function in an economic, social and environmentally responsible manner. Since the first description formulated by the OECD in 1976 for multinational companies, this concept has turned out to be a key issue for organizations when considering the impacts of their business strategies on the relationships with their stakeholders and on society.

International standard ISO 26000, in 2010, has distinct CSR as the ability of an organization to "identify and recognize responsibility for the impacts of their

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decisions and activities on society and the environment through transparent and ethical behaviour that add to sustainable development". The International Institute Sustainable Development (IISD) and The European Commission also emphasize the significant benefits of such a policy for firms, which are: "cost savings, greater productivity and quality, improved financial performance, enhanced brand image and reputation, increased sales and customer loyalty, improved their abilities to innovate, etc".

CSR activities have a say to a better evaluation of companies (Brown and Dacin 1997). The positive effects of CSR to retail companies have also been highlighted. Previous studies have underlined a optimistic relationship between CSR policy and customer loyalty through different mechanisms (Lombart and Louis, 2014).

Supporting a CSR activity also affects intangible Research as the one carried out by Martínez, Carbonell and Aguero (2006) supports the above conclusions, as it highlighted that 74% of consumers are interested to messages on the social actions carried out by companies and 59% of them would be willing to correct their purchase behavior depending on social variables.

In view of this situation, this study aims at confirming the influence of CSR policies for building up customer relationship through improving trust and commitment.

### Formulations of Hypotheses

H1. Consumer evaluations of company CSR have a positive influence on consumer loyalty.

H2. Consumer evaluations of company CSR have a positive influence on consumer trust.

H3. Consumer evaluations of company CSR have a positive influence on store image.

### Research methodology

- Research Design is Descriptive & Empirical in Nature.
- Data collection and research design for this study, we targeted Delhi/NCR with the goal of investigating a homogeneous sample in terms of consumption patterns and geographic area.
- In this study Research Instrument is Questionnaire. The questionnaire was designed and administered.
- Sample size - There were 150 participants in the survey with aged 18-40. They indicated the retail store where they shop most often, which ensured their familiarity with the store. The participants

reported shopping quite frequently each month with the focal retail store (25% two or three times, 57% more than four times). They also reported their long relationship with the store (38% three to five years, 34% more than five years). The respondents were well distributed age, gender, income, and education.

### Discussion and theoretical implications

This research provides reliable support to earlier studies for the positive direct effects of perceived CSR on loyalty. The results also highlight the significance of the role of mediating variables in the social responsibility–performance relationship.

Previous studies portrayed the positive influence of CSR on loyalty through trust. Our findings add to existing research by suggesting that social discount communication affects the relationship between CSR and customer loyalty. For a company, the positive effect of its social initiative is greater when in relation to its key stakeholders' priority issues. This research shows first that the effect of CSR on loyalty is stronger when retailers use social discount communication than when they do not. The win–win outcome through this CSR activity has been perceived by consumers.

The social discount communication decreases the effect of CSR on customer trust in the retailer and on store image. These results underline the contrasting effects of CSR when combined with social discount messages and confirm findings of previous research. To reinforce trust and store image, consumers need to be exposed to genuine messages from retailers about their motives and the non-profit organization. The implications for managers are that their CSR policy has short and long-term benefits, both on performance and social. To engage in a good behavior for their stakeholders, particularly for consumers, positively influences consumer loyalty. The results emphasize the mediating roles of trust in the retailer and store image perceptions on the relationship between perceived CSR policy and its performance. Trust and image play a role in forming and managing consumer relations. The results also have implications for the communication of CSR activities. The combination between CSR and social discount communication should be used carefully as it has both positive and negative effects on key outcome variables i.e. customer loyalty, customer trust and store image. By implementing a social discount space in store, retail companies could highlight the precise benefits provided to customers with the CSR campaign i.e. discount prices, the economic added

value of the campaign. However, to develop trust and a better store image, we recommend that retailers make possible identification of CSR actions in the store by introducing genuine gesture on their cause marketing. Firms should exhibit how they produce value not only for society but also for customers, in particular when the macro economic situation is hard-hitting.

### Psychometric properties of measurement scales

We used four criteria to assess the convergent validity and internal consistency of the constructs: item loading, communality ( $R^2$ ), reliability indicators ( $\rho$  and  $\alpha$ ), and average variance extracted (AVE).

All item loadings between an indicator and its underlying construct factor were greater than .5 (criterion for factor loadings of salient variables).

The reliability value of all constructs exceeded the .7 criterion, and the AVE values were above the recommended threshold of .5, in adequate support of convergent validity.

### Results

A bootstrapping estimation verified the statistical significance of each path coefficient.

The explained variance ( $R^2 = .43$ ) in the dependant variables and p-values of the regression coefficients (t-test) showed the explanatory power of the model. CSR has a positive effect on customer loyalty ( $\gamma = .26$ ,  $p < .01$ ) in support of H1.

For the indirect effects, we computed the product of the direct effects using bootstrapping in line with Cheung and Lau (2008)<sup>4</sup>. We uncover a significant effect of retailer CSR on trust in the retailer ( $\gamma = .50$ ,  $p < .01$ ). The product of these effects is significant ( $\gamma = .16$ ,  $p < .01$ ) indicating a mediating role of trust in the retailer, as predicted in H2.

Retailer CSR also exerts a significant effect on store image perceptions ( $\gamma = .44$ ,  $p < .01$ ) which significantly influence customer loyalty ( $\gamma = .28$ ,  $p < .01$ ). The product of these effects also is significant ( $\gamma = .10$ ,  $p < .01$ ) in support of H3.

### Conclusion

This research examined the direct and indirect effects of retailer CSR on customer loyalty. It also highlights the effects of social discount communication on the relationships investigated. Several implications, theoretical and managerial, can be drawn from the findings of this study.

This research provides reliable support to earlier

studies for the positive direct effects of perceived CSR on loyalty. The results also emphasize the importance of the role of mediating variables in the social responsibility–performance relationship.

Previous studies highlighted the positive influence of CSR on loyalty through trust. The results also highlight the mediating role of store image. Third, our findings add to existing research by suggesting that social discount communication affects the relationship between CSR and customer loyalty. For a company, the positive effect of its social initiative is greater when in relation to its key stakeholders' priority issues. As far as we know, this research shows first that the effect of CSR on loyalty is stronger when retailers use social discount communication than when they do not. The win–win outcome through this CSR activity has been perceived by consumers. We also found that social discount communication decreases the effect of CSR on customer trust in the retailer and on store image. These results underline the contrasting effects of CSR when combined with social discount messages and confirm findings of previous research.

### References

- Barber B. 1983 *The Logic and Limits of Trust*. Rutgers University Press, New Brunswick, N
- Barnett M. L. 2007 *Stakeholder Influence Capacity and the Variability of Financial Returns to Corporate Social Responsibility*. *Academy of Management Review* 32(3), 794–816
- Bhattacharya C. B., S. Sen 2004 *Doing Better at Doing Good: When, Why, and How Consumers Respond to Corporate Social Initiatives*. *California Management Review* 47(1), 9–24
- Blomqvist K. 1997 *The Many Faces of Trust*. *Scandinavian Journal Management* 13(3), 271–286
- Browne M. W., R. Cudeck 1993 *Alternative Ways of Assessing Model Fit*, in K. A. Bollen, J. S. Long (eds.), *Testing Structural Equation Models* (Sage, Newbury Park, CA), pp. 136–162
- Byrne B. M. 1998 *Structural Equation Modeling with Lisrel, Prelis, and Simplis*. Erlbaum, Mahwah, NJ
- F. Perrini: 2004, 'Corporate Social Responsibility, Trust Management and Value Creation', presented at EGOS 2004 "Trust in Hybrids", Ljubljana, Slovenia.
- Chaudhuri A., M. B. Holbrook 2001 *The Chain of Effects from Brand Trust and Brand Affect to Brand Performance: The Role of Brand Loyalty*. *Journal of Marketing* 65, 81–93
- Coop: 2005, 'Prospettive per il Commercio Equo

- e Solidale in Italia e in Europa', Coop Meeting, Genoa, Italy.
- Creyer E. H., W. T. Ross 1997 The Influence of Firm Behavior on Purchase Intention: Do Consumers Really Care About Business Ethics? *Journal of Consumer Marketing* 14(6), 421–432
  - Donaldson T., L. E. Preston 1995 The Stakeholder Theory of the Corporation: Concepts, Evidence, and Implications. *Academy of Management Review* 20(1), 65–91
  - Dwyer R., P. Schurr, S. Oh 1987 Developing Buyer–Seller Relationships. *Journal of Marketing* 51, 11–27 Cross Ref Google Scholar
  - Ellen P. S., L. A. Mohr, D. J. Webb 2000 Charitable Programs and the Retailer: Do they mix? *Journal of Retailing* 76(3), 393–406
  - FLO (Fairtrade Labelling Organizations International): 2007, Shaping Global Partnerships. Annual Report 2006/2007, .
  - Fornell C., D. F. Larcker 1981 Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. *Journal of Marketing Research* 18, 39–50
  - Freeman R. E. 1984 *Strategic Management: A Stakeholder Approach*. Pitman, Boston, MA
  - Garbarino E., M. S. Johnson 1999 The Different Roles of Satisfaction, Trust, and Commitment in Customer Relationships. *Journal of Marketing* 63, 70–87
  - Harford T. 2005 *The Undercover Economist*. Oxford University Press, Oxford, UK
  - Hira A., J. Ferrie 2006 Fair Trade: Three Key Challenges for Reaching the Mainstream. *Journal of Business Ethics* 63(2), 107–118
  - Hyscox, M. J. and N. F. B. Smyth: 2007, 'Is There Consumer Demand for Improved Labor Standards? Evidence from Field Experiments in Social Product Labeling', Working paper, Department of Government, Harvard University, Cambridge, MA.
  - Ims K. J., O. D. Jakobsen 2006 Cooperation and Competition in the Context of Organic and Mechanic Worldviews – a Theoretical and Case Based Discussion. *Journal of Business Ethics* 66(1), 19–32
  - Joreskog K. G, D. Sorbom 1993 *Structural Equation Modeling with the SIMPLIS Command Language*. Scientific Software International, Chicago, IL
  - Joreskog K. G, D. Sorbom 2002 *LISREL 8: Structural Equation Modeling with the SIMPLIS Command Language*, 5th printing. Scientific Software International, Lincolnwood, IL
  - Kennedy M. S., L. K. Ferrel, D. T. LeClair 2001 Consumers Trust of Salesperson and Manufacturer: An Empirical Study. *Journal of Business Research* 51(1), 73–86
  - Low W., E. Davenport 2006 Mainstreaming Fair Trade: Adoption, Assimilation, Appropriation. *Journal of Strategic Marketing* 14(December), 315–327
  - Margolis J. D., J. P. Walsh 2003, Misery Loves Companies: Rethinking Social Initiatives by Business. *Administrative Science Quarterly* 48, 268–305
  - Mayer R. C., J. H. Davis, F. D. Schoorman 1995, An Integrative Model of Organizational Trust. *Academy of Management Review* 20(3), 709–734
  - McWilliams A., D. Siegel 2000, Corporate Social Responsibility and Financial Performance: Correlation or Misspecification? *Strategic Management Journal* 21, 603–609
  - McWilliams A., D. Siegel 2001, Corporate Social Responsibility: A Theory of the Firm Perspective, *Academy of Management Review* 26(1), 117–127
  - Mohr L., D. Webb, K. Harris 2001, Do Consumers Expect Companies to be Socially Responsible? The Impact of Corporate Social Responsibility on Buying Behavior, *Journal of Consumer Affairs* 35, 45–72
  - Moore G. 2004, The Fair Trade Movement: Parameters, Issues and Future Research. *Journal of Business Ethics* 53(1–2), 73–86
  - Morgan R. M., S. D. Hunt 1994, The Commitment–Trust Theory of Relationship Marketing. *Journal of Marketing* 58, 20–38
  - Oliver, R. L.: 1999, 'Whence Consumer Loyalty', *Journal of Marketing, Special Issue*, 33–44
  - Orlitzky M., F. L. Schmidt, S. L. Rynes 2003, Corporate Social and Financial Performance: A Meta-Analysis, *Organization Studies* 24(3), 403–441
  - Potts, N. J.: 2004, Fairness with your Coffee? (Ludwig von Mises Institute, Auburn, AL),
  - Rotter J. B. 1971, Generalized Expectancies for Interpersonal Trust. *American Psychologist* 26, 443–452
  - Rubbens, C. and C. Wessels: 2004, 'The Business Case for CSR: In What Way does CSR Contribute to Competitiveness?', E-discussion, The World Bank, Washington, DC.
  - Schoorman F. D., R. C. Mayer, J. H. Davis 2007, An Integrative Model of Organizational Trust: Past, Present and Future. *Academy of Management Review* 32(2), 344–354
  - Tencati A.: 2002, Managing Sustainability, in L. Zsolnai (ed.), *Ethics in the Economy*. Handbook of Business Ethics (Peter Lang Academic

- Publisher, Oxford and Bern), pp. 187–209
- Vitell S. J. 2003, Consumer Ethics Research: Review, Synthesis and Suggestions for the Future. *Journal of Business Ethics* 43(1–2), 33–47
- Waddock S. A., S. B. Graves 1997, The Corporate Social Performance–Financial Performance Link. *Strategic Management Journal* 18, 303–319
- Weber J. 2007, Fair Trade Coffee Enthusiasts Should Confront Reality. *Cato Journal* 27(1), 109–117
- Wong A., A. Sohal 2002, An Examination of the Relationship Between Trust, Commitment and Relationship Quality. *International Journal of Retail and Distribution Management* 30(1), 34–50
- Wood D. J. 1991, Corporate Social Performance Revisited. *Academy of Management Review* 16(4), 691–718
- Yoo B., N. Donthu 2001, Developing and Validating a Multidimensional Consumer-based Brand Equity Scale. *Journal of Business Research* 52, 1–14
- Zadek, S., S. Lingayah and M. Forstater: 1998, *Social Labels: Tools for Ethical Trade, Final Report* (Commission of the European Communities, Brussels, Belgium).

# CONSUMER BUYING BEHAVIOUR IN ORGANIZED FASHION RETAIL OUTLETS

**Smita Bagai\***  
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**Abstract:** According to the World Bank's latest edition of the Global Economic Prospects, India is the fourth fastest growing economy in the world. Indian apparel industry which is the second largest contributor in the retail industry after food and grocery is seeing some major shifts. Entry of international brands, changes in preferences from non-branded to branded, the fast growing economy, large young consuming population in the country has made India a highly lucrative market.

The objectives of this study are to study the Indian apparel market in terms of market size and growth, to study the important demographic, psychological and socio-economic factors which influence the consumer purchase behaviour for apparel and to study how consumer behaviour for apparel is influenced by factors like family income, gender and peer influence.

Research Design of this research is descriptive and empirical in nature. Data are collected from 125 people of different incomes and gender from Delhi NCR region in age group 18 to 45 years old. Probability sampling is used for this research. A questionnaire was prepared to collect primary data from people of different areas, family income, gender, and attitude regarding purchase behaviour of apparel. : The collected data was analyzed using various statistical tools.

## Introduction

The Indian Retail sector has come off age and has gone through foremost transformation over the last decade with a manifest shift towards organized retailing. A US Based global management consulting firm, A T Kearney, a has ranked India as the fourth most striking nation for retail investment among 30 affluent markets. The Indian Retail sector has come off age and has gone through key transformation over the last decade with a visible shift towards organized retailing. Positive demographics, growing urbanization, increasing number of nuclear families, rising wealth amid consumers growing first choice for branded products and higher ambitions are other factors which will impel retail consumption in India.

## Consumer Behavior

Consumer behavior is the study of individuals, groups, or organizations and the processes they use to choose, safe use and dispose of products, services, experiences, or ideas to gratify needs and the impacts that these processes have on the consumer and society. It combines elements from psychology, sociology, marketing and economics. It tries to understand the decision-making processes of buyers, both individually and in groups such as how emotions influence buying behavior. It studies characteristics of individual consumers such as demographics and behavioral variables in an attempt to understand people's wants. It also tries to assess influences on the consumer from groups such as family, friends, reference groups, and society in general.

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Customer behavior study is based on consumer buying behavior, with the customer playing the three diverse roles of user, payer and buyer. Research has shown that consumer behavior is hard to predict, even for specialists in the field.

In this era of competition, understanding the consumer's lifestyle is need for the marketers. Lifestyle is the way a person lives including the person's individual attitude to the world. Market is identified for setting the trends and people follow it with full enthusiasm. Especially in India, Lifestyle depends on person's background, family, education, and nature of the work. These days a lot of researches are being carried out to improve the standard of living in particular in the metros. According to the World Bank's latest edition of the Global Economic Prospects, India is the fourth fastest growing economy in the world. China shows a clear sign of slowdown and ranks at number 16 in terms of GDP growth rate. India is fast on its way to becoming a large and globally important consumer economy. Indian consumer segment is broadly segregated into urban and rural markets, and is attracting marketers from across the world. The sector comprises of a huge middle class, relatively large affluent class and a small economically disadvantaged class, with spending anticipated to more than double by 2025. India hit ten-year high and stood first among the 63 nations surveyed in the global consumer confidence index with a score of 136 points for the quarter ending December 2016. Global corporations view India as one of the key markets from where future growth is likely to emerge. The growth in India's consumer market would be primarily driven by a favourable population composition and increasing disposable incomes. India's robust economic growth and rising household incomes are expected to increase consumer spending to US\$ 4 trillion by 2025. The maximum consumer spending is likely to occur in food, housing, consumer durables, and transport and communication sectors.

The growing purchasing power and rising influence of the social media have enabled Indian consumers to splurge on good things. By 2020, the electronics market in India is expected to increase to US\$ 100 billion from US\$ 28 billion in FY17. The production is expected to reach to US\$ 104 billion by 2020. By 2018, the television industry in India is expected to grow to US\$ 11.78 billion from US\$ 9.23 billion in 2016, registering a growth of 12.97 per cent. Smartphone shipments rose 15 per cent year-on-year to 29 million between January-March 2017. India's tablet PC shipments increased 2.9 per cent to 722,000 between April-June 2017 over the previous quarter,

Indian economy, one of the fastest growing economies

of the world, is witnessing major shifts in consumer preferences. Increasing disposable income, brand awareness and increasing tech-savvy millennial population are the driving factors of corporatized retail within the country. Overall, Indian retail scenario has shown sustainable long-term growth compared to other developing economies.

The Indian retail market was worth Rs 41,66,500 crore (US \$641 billion) in 2016 and is expected to reach Rs 1,02,50,500 crore (US \$1,576 billion) by 2026, growing at a Compound Annual Growth Rate (CAGR) of 10 per cent. It is envisaged that the current fashion retail market worth Rs 2,97,091 crore (US \$46 billion) will grow at a promising CAGR of 9.7 per cent to reach Rs 7,48,398 crore (US \$115 billion) by 2026.

Indian apparel industry which is the second largest contributor in the retail industry after food and grocery is seeing some major shifts. Entry of international brands, changes in preferences from non-branded to branded, the fast growing economy, large young consuming population in the country has made India a highly lucrative market. India has the world's largest youth population, which is becoming fashion conscious owing to mass media and social media penetration. This has opened unprecedented retail market opportunities. The promising growth rate of 9.7 per cent makes the Indian fashion industry prominent in the retail sector. With a GDP growth rate of 7 per cent, India has an edge over developed markets of the US, Europe and Japan which are expected to grow at a rate of 2-3 per cent. Favourable trade policies and increased penetration of organised retail among other factors contribute in making Indian fashion industry attractive for investors.

Within the retail categories, apparel retail has demonstrated comparatively high receptivity towards corporatized retail. High penetration of corporatized retail in apparel has also paved the way to introduce more formal and systematic processes and procedures in operations, procurement and distribution. As a consequence, apparel retail market has managed to harness the advantages offered by modern management concepts leading to improved product offering, better customer management and scientific supply chain management techniques. It is expected that apparel retail will continue to witness deeper penetration of corporatized retail beyond the major urban clusters and the increase in the demand of branded products.

### **Intersegment Analysis**

The Indian apparel market can be broadly classified into men's wear, women's wear and kidswear. Currently, men's wear holds major share in the apparel market. It accounts for 41 per cent of the total market.



Women's wear contributes almost 38 per cent, while kidswear contributes 21 per cent of the market. It is estimated that over the next decade women's wear and kids wear will demonstrate high CAGR of 9.9 and 10.5 per cent respectively, resulting in rise in market share of these categories. Both, men's wear and women's wear is expected to contribute 39 per cent each to the total market in 2026, with kidswear accounting for the rest 22 per cent.

### Men's wear

With the market size of Rs 1,24,423 crore (US \$19 billion), men's wear is the largest segment in apparel market and is expected to grow at a CAGR of 9 per cent for next 10 years to reach Rs 2,95,795 crore (US \$45.5 billion) by 2026. The various product categories of men's wear segment include shirts, trousers, suits, winter wear, t-shirts, denim, daily wear, active wear, ethnic, innerwear, etc. Shirts are the single largest category in men's wear, followed by trousers and denim.

In recent years, denim, activewear and t-shirts have shown promising growth and are expected to grow at high CAGRs of 14 per cent, 14 per cent and 12 per cent respectively, owing to changing preference of the consumers. While denim and t-shirts have matured as categories and have shown a consistent growth over a considerable period of time, activewear has recently evolved and has high growth potential. This is due to the boom in fitness and healthcare. In addition, the consumers in India have evolved and now understand that clothing for fitness is different from everyday clothing. These factors contribute to high growth projections of 14 per cent over the next decade. The growth in this category is not just restricted to metros and Tier -I cities and has shown growth in Tier -II and -III cities as well.

The acceptance of smart casuals in corporate has boosted growth of western wear among working professionals. Formal wear is not restricted only to shirts and trousers but has a wide range of other options such as smart jackets, brightly coloured or patterned shirts complemented with loafers, etc.

Men's denim wear is expected to grow at a rate of 14 per cent per year. The young population of the country is the key demand driver of this segment. Due to rise in media penetration in the country and global fashion awareness among youth, a shift in consumer's choice of denim wear has been witnessed in the country. Penetration of international brands in denim has provided consumers with ample product options.

### Women's wear

The women's wear market in India contributes 38 per cent of the total apparel industry. It is estimated to be worth Rs 1,11,467 crore (US \$17.5 billion in 2016) and is expected to grow at a CAGR of 9.9 per cent to reach Rs 2,86,456 crore (US \$44 billion in 2026). Globalization coupled with fast fashion has resulted in awareness on fashion trends and styling. Further, the increase in number of working women has fuelled the women's wear market. The demand is expected for western wear, fusion wear and occasion specific ethnic wear. Women's wear in India comprises of ethnic wear, western wear, Indo-western, innerwear, etc. Ethnic wear is the single biggest category in women's wear segment with a share of 66 per cent. In ethnic wear, the saree is perhaps the most common traditional Indian dress for women and has a market of Rs 37,837 crore. It is expected to grow at a CAGR of 5 per cent and reach Rs 61,632 crore by 2026. Though a market shift is expected from saree to salwar kameez and western wear in urban and semi-urban markets, saree will still remain as the predominant category among elderly and middle aged women across urban and rural India.

Salwar kameez is another dominating category in ethnic wear, especially among the working women because of its comfort level. With a market share of Rs 35,804 crore, it is expected to grow at a CAGR of 12 per cent to reach Rs 1,11,203 crore by 2026. But, it has started facing stiff competition from the western wear owing to increased number of working women in the country, especially in urban areas. The increased competition from western wear has resulted in a new category — Indo-western (fusion-wear).

The innerwear category is another promising category in the women's wear market. It is growing at a CAGR of 14 per cent and is expected to reach Rs 60,277 crore in 2026 from the current market size of Rs 16,259 crore. Branded innerwear presently contributes about 35-40 per cent of the total women's innerwear market and is expected to reach to 40-45 per cent in 2020.

Denim is another high growth category among women's wear and is expected to grow by a promising rate of 17.5 per cent for the next ten years to become a market of Rs 10,209 crore from Rs 2,035 crore currently. Initially, the denim brands used to focus primarily on men, but with the change in the demand and preferences of women, they started catering to women consumers as well. Stretch denims have seen a huge demand among women.

Women's t-shirts and tops categories are also growing fast owing to generic inclination for western wear

categories. The women tops and shirts market is of Rs 2,236 crore and is expected to grow at a CAGR of 14 per cent to reach Rs 8,291 crore by 2026. The women's t-shirts market of Rs 933 crore is growing in tandem with the growth of other casual wear categories and is expected to grow at a CAGR of 17 per cent to reach Rs 4,484 crore by 2026.

### **Region-Wise Distribution of Apparel Market**

Demand for various apparel categories varies substantially across the country. The urban market that mainly comprises of metro cities such as Delhi/NCR, Mumbai, Bengaluru, Chennai, etc., are the biggest markets for apparel in India and contribute 23 per cent to the Indian apparel market. Considering the fact that almost 70 per cent of the population resides in villages, the major contribution of urban cities to the apparel market indicates the higher purchasing power of the people in urban cities, their frequency of purchases and tendency to purchase premium and quality products. The metro cities house almost all the big national and international brands, driven by the well informed and employed population. The metros also witness huge penetration of women's western wear as compared to Tier -I or Tier -II cities of the country. The well informed and trend conscious female customer base has led to deeper penetration of brands and private labels in the metros.

But lately, many global brands have started penetrating into Tier -I and -II cities, while domestic brands are also strengthening their position in these markets. Many fashion retailers and apparel brands have already established themselves in smaller cities. High real estate costs, competition among branded players and saturation in metro cities of the country have made big brands to move towards the smaller cities of the country. The increasing purchasing capacity and awareness of fashion and trend in small cities has resulted in providing a huge market to the organised players of the country.

The rural apparel market in India is still primarily catered by unbranded and unorganised local players. Need based clothing and price sensitivity among people of rural India does not make it a lucrative market for branded players.

### **Price Segmentation of Apparel Market**

The apparel market can be broadly divided into super premium, premium, medium, economy and low price segments. The medium price segment holds majority of the share among apparel segment by holding 29 per cent followed by economy which holds 28 per cent of the share of the apparel market of the country. The

price sensitive rural population forms a major chunk of 54 per cent of the low and economy price segments of apparel market.

Customers across income groups purchase medium priced apparel at varying frequencies. Sometimes the customers of the premium and super premium segment wish to trade down to medium segment while in some other cases the low income customer prefers to trade up to medium segment depending on the requirement of the attire and look. Many Indian consumers of the medium income level prefer medium price segments as it offers the assurance of certain minimum quality standards at a reasonable and affordable price.

The super-premium and premium price categories are value driven categories and the product offerings of these segments come from established brands.

### **Select Trends of Indian Apparel Market**

In India's high-growth, fast-changing retail apparel market, with significant new growth opportunities for both foreign and domestic players. As a result of it, Indian apparel industry is witnessing some specific trends.

#### **Sustainable and eco-friendly manufacturing**

As the country is confronted with pollution issues, it has become adopt eco-friendly strategies. The industry is focusing on reducing water consumption and techniques to avoid usage of organic colours in apparel manufacturing. Consumers are sensitive and are increasingly getting aware about environmental issues, resulting in growing inclination towards eco-friendly and organic apparels. Brands/ private labels have started catering to this market especially in babies, kidswear and premium adult wear category segments.

#### **Increased inclination towards smart garments**

With technological penetration in everyone's lives, garments too are witnessing some major up-gradation in technology. After smart phones, smart televisions, smart watches, etc., 'smart shirts' have emerged as a new trend in apparel industry. Companies are trying to woo the customers by providing smart shirts to the growing tech freak population of the country.

Right now, the wearable technology market mainly consists of wearable devices such as fitness bands, smart watches etc. But, recently there has been a shift towards smart garments among premium and luxury customers.

#### **Smart casuals**

Corporate dressing these days is not restricted to strict formal wears in pastel colours and minimal designs

but has gone under a transition. In women's wear the concept of smart casuals has carefully replaced traditional formal wear such as sarees, western formals and salwar-kameez. Increasing inclusion of smart casuals or semi-formals has resulted in acceptance of chinos and other relaxed trousers along with half sleeved shirts or t-shirts.

### **Continued rise of 'Organized retail'**

The Indian fashion retail industry is transforming rapidly and is seeing shift from unorganized to organised retail. The transformation is due to increase in income, increased penetration of branded wear in country and awareness of fashion trends among consumers. But, nowadays couture is not limited to metros only. Tier -II cities and semi-urban cities have emerged as huge potential markets for these organised players. Penetration of organized retail chains has contributed to the growth of apparel market in these markets. Market expansion in non-metros seems an lucrative opportunity for domestic and international brands. Once considered value conscious consumers of Tier -II cities are now open to spend more on fashion and look good. Apparel retail in non-metros is growing exponentially due to which more brands are entering hinterlands.

### **Apparel sales in e-commerce**

Online shopping in India is not a new phenomenon anymore, although it is in nascent stage but blooming very rapidly. E-commerce has grown in recent years and has touched every person's life. It has played a very vital role in bridging the gap between consumers residing in Tier -II and Tier - I cities and premium wear sellers. It has made availability of premium brands in semi urban areas where these brands have no retail outlets.

In India, e-commerce portals and marketplaces have established themselves by providing huge discounts to lure customers thus changing the consumers' mindset and providing wider range of products to choose from. According to Technopak Analysis, currently there are 431 million Internet users which is expected to reach 750 million by 2026. Cash crunch due to demonetisation along with improvement in net banking facilities will fuel the growth of e-commerce in the country. The government's initiatives to develop cash less, inclusive and digital citizens has provided further boost to e-commerce industry. The e-tailers have started launching their private fashion labels to increase their profit margins.

Despite of growing at a promising rate, Indian fashion retail is facing its own challenges. Some of the major

challenges faced by fashion industry in the country are as follows:

### **Infrastructural bottlenecks and efficiency**

Indian fashion retail industry faces challenge of inadequate infrastructure such as poor conditions of roads, highways etc., which results in becoming roadblock in growth of apparel fashion industry. India, to grow to its fullest potential, would have to invest heavily in infrastructure such as proper connectivity of roads, inland waterways, etc.

According to World Bank's Logistics Performance Index 2016, India ranks at 35 when compared to 160 countries. It scored 3.42 on a scale of 5, thus showing a huge scope of improvement in infrastructure which is a major hurdle in logistics of the apparel industry.

### **Poor Internet penetration in the country**

Despite e-commerce blooming in the country, India has poor Internet connectivity as compared to other growing economies. In India, e-commerce is in its nascent stage but has grown significantly in the last fifteen years and is set to grow at a high rate in the next decade. However, the quality of Internet services provided is poor due to lack of infrastructure. To ensure long term growth of e-commerce in India, it is essential to upgrade the Internet services. Unless, the government takes initiatives in this direction, e-commerce industry would not be able to reach its fullest potential. In addition, Cyber security is another major threat in e-tail industry.

### **Changing consumer behavior**

In today's business environment, consumer is the king. It has become imperative for the manufacturers to cater to the consumers according to their taste and preference. With mass media penetration and growing disposable income, Indian consumers have become more demanding and adaptable to change in fashion. With the rapidly changing profile of consumers, it has become challenging for retailers to keep up with shifting shopping demands. Shoppers today are well informed about fashion trends and demand accordingly. Thus, it becomes challenging for retailers to cater their customers with constant change in preferences.

Consumer behavior is highly influenced by their attitude. "Attitude is a feeling, belief, or opinion of approval or disapproval towards something". Behavior is an action or reaction that occurs in response to an event or internal stimuli (i.e., thought). Behavior can be influenced by a number of factors beyond attitude, including preconceptions about self and others, monetary factors, social influences (what peers and community members are saying and doing) and convenience.

## Literature Review

Shopping behavior is a complex and multidimensional concept. Defining shopping orientation is extremely difficult, due to numerous interrelated variables. Although the concept shopping orientation is described by researchers from various perspectives, certain major variables (or concepts) are repeated in the different descriptions. Demographic characteristics are easily measurable and identifiable segmentation variables

The study briefly reviews the existing literature in the area of factors influencing shopping behavior and store choice behavior. There are a few common characteristics among the different classifications of shoppers as proposed by different authors.

A study analyzed the significance of demographic profile of consumers affecting the purchase decision of branded garments and to observe from gender perspective the consumer awareness about different apparel brands available in the Indian market and also to find out whether there is a significant difference in total expenditure on branded apparels done by males vis-a-vis females. The results exhibited no significant differences in the brand awareness, shopping frequency and shopping expenditure between males and females (Rajput, 2012).

Kopp et al (1989)<sup>4</sup> proposed price consciousness, quality consciousness, fashion consciousness, Nicholl et al.'s (2002) window (leisure) driven shoppers, Kopp's recreational shopping, Boedekar's (1995) search for experience and recreation, Arnold and Reynolds' (2003) hedonic shopping motivations and Jin and Kim's (2003) leisurely motivated shoppers.

Radha and Shylajan (2007) proposed a conceptual model and considered the influence of various marketing and demographic factors on consumers habitual buying behavior towards branded articles. But identification of factors, existence of which indulges consumers to go for organized retail apparel brands are still left unturned.

With reference to store choice variables, Moye and Kincade (2003)<sup>5</sup> reported that the occasion for which an apparel item is bought does influence the consumer's importance rating of the store environment and there were higher expectations for the environment of a store offering formal merchandise than a store offering casual merchandise.

Leung and Taylor (2002)<sup>6</sup> in a study on fashion buying criteria of X generation consumers in Hong Kong found that X-ers are attracted by a good interior store layout; and feel good service is essential when buying fashionable clothing. In the Indian context, a study was

done by Sinha et al. (2002) on store choice.

Wahyuningsih and Chris Dubelaar (2004) in his paper 'Consumer Behavior and Satisfaction' of Monash University have concluded that to satisfy their customers, companies need to identify clearly each segment of consumers whether they are passive, rational-active, or relational-dependent consumers. This is because these three types of consumer perceive their levels of satisfaction differently.

Douglas D. Davis and Edward L. Millner (2004) studies have concluded that series of purchase decisions for chocolate bars given (a) "rebates" from the listed price, (b) "matching" quantities of chocolates for each bar purchased and (c) simple price reductions, participants purchase significantly more chocolate bars under a "matching" sales format than under a comparable "rebate" format.

The competition from new retail formats has increasingly resulted in shoppers visiting multiple retail stores/ formats and developing loyalties toward a set of stores/formats instead of gravitating to just one store or format to fulfill a variety of shopping needs and motives (Prasad and Aryasri, 2011; Gupta and Chintagunta, 2011; Nielsen, 2011; Sinha, 2004). Furthermore, the changing lifestyles of Indian consumers and the resulting changes in consumption patterns trigger changes in shopping styles of consumers and also the factors that drive people into stores (Kaur and Singh, 2006).

Recent past study by Khare (2011) examined Indian small city consumers attitude towards malls and found that hedonic and utilitarian values were the significant shopping motives influencing their attitudes towards shopping malls. However, Sinha and Benerjee (2002) analysed shopping orientations of Indian shoppers and found that the Indian shoppers seek emotional values more than functional values of shopping.

In contrast to previous research examined the influence of functional attributes (that is, product quality, produce assortment, service quality and store atmosphere) of shopping value in relation to supermarket and traditional retail formats. His study suggests that functional attributes facilitate the shoppers motive of hedonic and utilitarian value towards choice of retail formats. As customers expectation move continuously upward, it is imperative for the retailers to avoid the complaints.

## Significance of the study

In organized retailing apparel retailing has 38.1% of the major market share. But, it is a bit sensitive segment in retailing industry, where the products can

easily undergo obsolescence (out fashioned) if they are not sold in a proper time. Especially the fashion and luxurious brands are very much prone to this type of phenomena and the products which have been sold at very low discounts will not yield profits for the companies.

At present, apparel retailing is considered as one of the fast moving consumer goods retailing (FMCG). Hence the goods should be moved or sold faster than we expect, otherwise the retailers should face problems in selling. Thus, consumers buying behavior has drawn a considerable attention of the earlier researchers. Its impact on designing marketing strategies also became the part of a sizeable number of studies. But, while reviewing the literature on buyer behavior as well as retail marketing, only microscopic number of studies has been found available that analyzes how consumer behavior functions in retail market.

The present profit margins of such retail brands are found to be substantially high and in the long run these private level brands are expected to enhance the brand equity of the established retailers. Thus, retailers intention of bonding comes in the nascent stage with the well-heeled entry into the apparel retailing, presently the market of which is estimated at around \$13 billion and accounting for nearly 20% of the country's total export.

Gupta (2004) investigated the factors influencing the choice of private label in departmental stores of Hyderabad for two product categories - processed food and toiletries. A study was conducted by Memon (2006), to trace the impact of private level brands on retailing dealing in garments. This work considered only two retail brands Westside and Pantaloons in Ahmedabad city and accepted the hypothesis that people are ready to switch over to other brands if the same facilities are available. Jinhee Nam et al (2007) in their study examined the apparel and shopping preferences of mature women in America. Independent living residents were surveyed concerning fashion consciousness, fashion information sources and shopping behaviours. Young and mature consumers' reactions to female apparel ensembles were compared. Mature subjects purchased apparel for pleasure or need, but less for conformity. Recently, Radha Krishna and Shylajan (2007) proposed a conceptual model and considered the influence of various marketing and demographic factors on consumers habitual buying behaviour towards branded articles. But identification of factors, existence of which indulges consumers to go for organized retail apparel brands are still left unturned. Lahiri, Isita et al (2010) in their study make an attempt to identify the factors of the

consumers' buying behavior that is influenced by retail apparel segment, and to assess the importance of each of them to consumers in selecting apparel from organized retail outlets. Krishna, C. V. (2011) says that Indian retail is in an expansion spree and many companies are joining the retail landscape. After food and groceries segment apparel is the next large retail segment and the consumption of apparel is also very large in volume. Previously the manufacturing brands used to lead the apparel category in the early days and the penetration of the private label brands was very small. But now things have changed and private label brands are leading in every segment. In the apparel segment also many private label brands are leading the competition. Consumer buying behaviour is mainly affected by many determinant factors and this paper aims at understanding and identifying the important determinant factors affecting the consumer buying behaviour towards private label apparel. Sullivan, Pauline et al (2012) say that despite Generation Y (Gen Y) consumers' significant role as a decision maker in the market, it is increasingly challenging for retailers to understand these consumers' behaviour and psychology. To enhance an in-depth understanding of Gen Y consumers, this study examined the effect of fashion involvement (FI) and perceived experiential value (EV) on Gen Y consumers' retail apparel patronage behaviour.

Mohamadou L Fadiga et al (2005) in their study identify sources of demand growth for apparel in the US based on consumer demographic profiles, regions, and product characteristics.

Cowart, Kelly O.; Goldsmith, Ronald E. (2007) investigate motivations for online apparel consumption using the Consumer Styles Inventory.

### Objectives:

1. To study the Indian apparel market in terms of market size and growth,
2. To study the important demographic, psychological and socio-economic factors which influence the consumer purchase behaviour for apparel
3. To study how consumer behaviour for apparel is influenced by factors like family income, gender and peer influence.

### Research Methodology

- Research Design: Research Design for this research is descriptive and empirical in nature
- Data type – Primary and secondary both types of data are used for this research
- Sample Size - Data are collected from 125 people of different incomes and gender from Delhi NCR

- region in age group 18 to 45 years old.
- Sampling technique – Probability sampling is used for this research.
- Research Instrument -A questionnaire was prepared to collect primary data from people of different areas, family income, gender, and attitude regarding purchase behaviour of apparel.
- Data analysis technique: The collected data was analysed using various statistical tools.

**Profile of the Customers**

**Gender of the Respondent**

71 respondents are male and 54 respondents are female.

Gender	Percent
Male	56.8
Female	43.2
Total	100.0

**Age of the Respondents**

65 percent of the respondents were in the age group of 18 to 30.

35 percent of the respondents were in the age group 30 to 40.

Age Group	Percent
Between 18–28	65
Between 28–40	35

**Monthly Income of the Respondents**

Majority of respondents were in income bracket 50000 – 1Lakh

Monthly Family Income in Rs.	Percent
10000 - 20000	8
20000 - 30000	20
30000 – 50000	28
50000 – 1Lakh	32
More than 1 Lakh	12

**Data analysis and findings:**

A sample of 125 young people was taken out of which 79 were male and 46 were female.

Following were the findings among the students:

- Most of the women purchases apparels from Malls where as in contrast men purchased have preferred retail stores and malls.
- Majority of men and women preferred informal apparel.
- Majority of male and female students purchased

readymade apparel rather than stitched clothes. All have preferred western apparel.

- For both male and female students, if their brand is not available, majority of them either shift to another brand or buy whichever is available.
- Majority of people purchased apparel by visiting malls and retail store and not through e-commerce.
- Majority of male students purchased apparel based on their own choice or on the opinion of their friends. Majority of female students purchased apparel based on their own choice.
- Females were influenced by their friends but males were not influenced by the same.
- Majority of people spent between Rs. 2000 and Rs. 3500 on apparel.
- Majority of people have purchase their apparel after watching movies.

List of factors considered and their mean score which influence the purchase of apparel For measurement Likert’s scale are used with ratings from 1 (Highest) to 5 (Lowest).

Factors	Mean
I am attracted by advertisements.	3.77
Retail outlet name carries extra weightage	3.08
There are many options available here.	3.65
Apparel bought from here are of high quality	2.91
Buying apparel is not costly here	4.37
I used to buy from here as other people also like to visit here	1.23
Buying from reputed outlets increases social recognition	3.62
I am attracted by the discount offered by the outlets	4.09
Convenient to buy from retail outlet due to pick and choice	4.12
I am attracted by the discount offered by retail outlets	3.5

The most important factors considered while buying apparel were

- Price
- Convenient
- Economical
- Advertisement
- Options available
- Social recognition

Null Hypothesis Ho: There is no relation between gender and type of apparel bought.

Alternative hypothesis H1: There is a relation between gender and type of apparel bought.

### Chi – Square Test

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.570	1	.049
Continuity Correction	.070	1	.034
Likelihood Ratio	1.328	1	.045

Since the significance value is less than the level of significance 0.05, we accept alternative hypothesis that there is a relation between gender and type of apparel bought.

Null Hypothesis Ho: There is no relation between income group and type of apparel bought.

Alternative hypothesis H1 : There is a relation between income group and type of apparel bought.

### Chi – Square Test

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.672	3	.0344
Likelihood ratio	3.093	3	.0453
Linear-by-linear association	.182	1	.0421

Since the significance value is less than 0.05, we accept Ho, we accept alternative hypothesis there is relation between income group and type of apparel bought.

## Conclusions

Most of the people who visited these stores were salaried people. In general, people have belief that new-generation outlets are more visited by Business-class people which proves to be wrong. Retail organizations both existing and new should take note of this and keep trendy outfits which are demanded by the salaried people to remain updated about fashion when working in corporates. This is because corporate dressing has undergone a change these days. Stores like Westside and Pantaloons were more visited by people having income less than Rs.10,000. This casts a serious doubt that these outlets are meant for higher class people only and are visited more by them. Stores should take note of this and should keep prices for certain outfits as low as 199-399 which are more affordable by people in such income category for increasing more footfalls inside the stores. Westside and Pantaloons has succeeded in attracting people from such low income category also because of its pricing strategy affordable to every class.

Organized retail sector is growing rapidly and consumers are shifting to shopping in organized retail stores. Thus, understanding of shoppers' behavior is the key to success for the retailers. Marketers will have to understand the consumers' shopping behavioral dimensions that will help them to tap the consumer in a better way. Consumer purchase behavior is an important factor that affects the strategies adopted by the retailers. Shopping habits of Indian customers

are changing due to their growing disposable income, relative increase in the younger population, and the change in attitudes towards shopping. In the study researchers have observed that customer purchasing behavior towards garments & cosmetics (67) followed by food & eatables (41) and electronic goods (24). It was observed that the performance of the salesperson was up to the mark in communication and courtesy while they lack in the performance as far as product knowledge, discipline and prompt services are concerned Hence retailer should provide training for product knowledge, discipline and prompt service which actually increase customer satisfaction. Parameters considered for this study includes price discount, special offers, variety of products, retail services, convenience to customer, and store ambience. It was observed that The majority of customers prefer to visit particular retail outlets because of Price discount (38), followed by variety of products (34) and convenience to customer (31). Researcher also found that based on price discount, variety of products kept in the store and customers' convenience, the type of retail format visited by the customers are department store (74), hypermarket (44) and supermarket (32). Finally researchers conclude that customer purchase behavior changes positively with price of the product and availability of products. Consumer purchase behavior changes negatively due to poor quality of products.

## References

- Berman B, Evans J (2005). Retail Management: A Strategic Approach, Pearson Education, Asia, Singapore.
- Berry LL (1996). Retailers with a Future". *Mark. Manage.* Spring 5(1):36-46.
- C R Kothari (2006), "Research Methodology: Methods & Techniques", New Delhi: New Age International Publishers
- Cardoso PR, Pinto SC (2010). "Hedonic and utilitarian shopping motivations among Portuguese young adult consumers", *Int. J. Retail Distribut. Manag.* 38(7):538-558.
- Connolly DA, Lindsay DS (2001). The influence of suggestions on children's reports of a unique experience versus an instance of a repeated experience. *Appl. Cogn. Psychol.* 15:205-223.
- Darden WD, Howell-Darden R, Miller S (1980). Consumer Socialization Factors in a Patronage Model of Consumer Behavior. *Advan. Cons. Res.* 8:655-660.
- Darden WR, Howell RD (1987). "Socialization effects of retail work experience on shopping orientations", *J. Acad. Mark. Sci.* 15(3):52-63.
- Gupta S, Chintagunta PK (1994). "On using

- demographic variables to determine segment membership in logit mixture models", *J. Market. Res.* 31:128-136.
- Gupta S, Chintagunta PK (1994). On using demographic variables to determine segment membership in logit mixture models. *J. Mark. Res.* 31:128-136.
  - Jackson DW (1999). One More Time: How do you Satisfy Customers. *Bus. Horiz.* 42:71-76.
  - Kaur P, Singh R (2006). Children in family purchase decision making in India and the west: a review, *Acad. Mark. Sci. Rev.* 10(8):1-32.
  - Kearney AT (2009). Retail Report.
  - Khare A (2011). Mall Shopping Behaviour of Indian Small Town Consumers. *J. Retail Consumer Services* 18(1):110-118.
  - Kopp R J, Eng R J and Tigert D J (1989), A Competitive Structure and Segmentation Analysis of the Chicago Fashion Market", *Journal of Retailing*, Vol. 65, No.4, pp. 496-515
  - Laaksonen M (1993), "Retail patronage dynamics: learning about daily shopping behaviour in contexts of changing retail structures", *J. Bus. Res.* 28:31-74.
  - Leszczyc Peter TLP, Timmermans HJP (1997). "Store Switching Behaviour", *Marketing Letters* 8(2):193-204
  - Leung J W K and Taylor G (2002), "Fashion Buying Criteria of X Generation Consumers in Hong Kong", *Journal of Fashion Marketing and Management*, Vol. 6, No.1, pp. 63-76
  - Magleburg T F, Doney P M and Bristol T (2004), "Shopping with Friends and Teens" Susceptibility to Peer Influence", *Journal of Retailing*, Vol. 80, No. 2, pp. 101-116
  - Mascarenhas O A I and Higby M A (1993), "Peer, Parent and Media Influences in Teen Apparel Shopping", *Journal of the Academy of Marketing Science*, Vol. 21, No.1, pp. 53-58
  - Monroe KB, Guiltinan JP (1975). A path analytic exploration of retail store patronage influences. *J. Cons. Res.* 2:19-28.
  - Moye L N and Kincade D H (2003), "Shopping Orientation Segments: Exploring Differences in Store Patronage and Attitudes toward Retail Store Environments among Female Apparel Consumers", *International Journal of Consumer Studies*, Vol.27, No.1, pp. 58-71.
  - Nicholls J A F, Li F, Kranendonk C J and Roslow S (2002), "The Seven Year Itch? Mall Shoppers Across Time", *Journal of Consumer Marketing*, Vol. 19, No. 2, pp. 149-165.
  - Nielsen AC (2011). India's affluent consumers prefer larger pack sizes to combat inflation. <http://in.nielsen.com/news/20111010.shtml> accessed on 11.
  - Prasad 11303.
  - Prasad Ch. JS, Aryasri AR (2011). Effect of shopper attributes on retail format choice behaviour for food and grocery retailing in India. *Int. J. Retail. Distr. Manage.* 39(1):68-86.
  - Prus R (1993), "Shopping with Companions: Images, Influences and Interpersonal Dilemmas", *Qualitative Sociology*, Vol. 16, No.2, (June) pp. 87-110.
  - Radha KG, Shylajan CS (2007). Determinants of Habitual Buying Behavior: A Study on Branded Apparel. *The Icfai. J. Mark. Manage.* 6(3):6-21.
  - Rajput N (2012). "Dynamics of Female Buying Behaviour: A Study of Branded Apparels in India", *Int. J. Market. Stud.* 4:4.
  - Rhee H, Bell DR (2002). "The inter-store mobility of supermarket shoppers", *J. Retail.* 78(4):225-237.
  - Shim S, Kotisopoulos A (1992), "Patronage Behaviour of Apparel Shopping: Part II. Testing a Patronage Model of Consumer Behaviour", *Clothing Textiles Res. J.* 10(2):58-64.
  - Shim S, Kotsiopoulos A (1993). A typology of apparel shopping orientation segments among female consumers. *Cloth. Text. Res. J.* 12(1):73-85.
  - Sinha PK, Banerjee A (2004). Store choice behaviour in an evolving market. *Int. J. Retail. Distr. Manage.* 32(10):482-94.
  - Sinha PK, Banerjee A, Uniyal DP (2002). "Deciding Where to Buy: Choice Behaviour of Indian Shoppers," *Vikalpa* 27(2):13-28.
  - Sirohi N, McLaughlin EW, Wittink DR (1988). "A model of consumer expectations and store policies on retail salesperson service, satisfaction, and patronage, *Clothing Textile Res. J.* 15(2):115-124.
  - Sivadas E, Baker-Prewitt JL (2000). "An examination of the relationship between service quality, customer satisfaction and store loyalty", *Int. J. Retail Distribut. Manag.* 28(2):73-82.
  - Smith PR, Taylor J (2005). *Marketing Communications: An Integrated Approach*, Kogan Page India, London.
  - Stone GP (1954). "City Shoppers and Urban Identification: Observations on the Social Psychology of Urban Life," *Am. J. Sociol.* 60(1):36-45.
  - Taher A, Leigh TW, French WA (1996). "Augmented retail services: the lifetime value of affection", *J. Bus. Res.* 35(3):217-228.



# A STUDY OF EMPLOYEE MOTIVATION AND ITS IMPACT ON EFFECTIVENESS AND PRODUCTIVITY WITH REFERENCE TO IT/ITES COMPANIES

Sweta Bakshi\*  
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**Abstract:** *The purpose of this study is to identify the factors that effects employee motivation and its relationship with organizational effectiveness and productivity.*

*The literature and various studies concluded that motivations have positive effect on organization's effectiveness and productivity. More the empowerment and recognition of employees in an organization is increased, more will their motivation to work will enhance. Also there exists a positive relationship between employee motivation and organizational effectiveness. The more the employees are motivated to tasks accomplishment higher will the organizational performance and productivity.*

*The study focuses on the practice and observance of the two central factors empowerment and employee recognition for enhancing employee motivation which leads to organizational effectiveness. The organizations should design their policies in a proper way so that employee could be appreciated on their tasks fulfillment and achievements. This will definitely lead to increase the productivity of the organization.*

*The Software industry and its operation have attracted the concentration of a considerable number of researchers in the last decade, as the industry has proven its uniqueness in nature, operation, contribution to GDP and HR practice. The software industry is distinguished from other industries, by fast changing technology, quality conscious and multinational clients, stiff international competition and shortage as well as fast obsolesce of skill, although the success of IT companies depends on its' talented and skilled workforce. As a result, measurement and management of performance of individual, team and the organization as a whole is a requisite. The paper tried to study the attitude of the employees' of the software companies in Delhi/NCR towards performance appraisal.*

**Keywords:** *Motivation, Organizational Effectiveness, Productivity*

## Introduction

The effectiveness of organization and employee motivation has been the spotlight of intensive research effort in modern times. How well an organization motivates its personnel in order to achieve their assignment is of paramount concern. Employees in every organization are becoming increasingly conscious that motivations increases productivity. Despite it is apparent that the pace of change in our

business environment presents fresh challenges daily, not a single research work has targeted to investigate the impact of employee motivation and organizational performance.

Every organization wants to be flourishing and have desire to get constant progress. The current period is extremely competitive and organizations are facing employee retention challenges. To overcome these manacles a sturdy and positive relationship should be

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created and maintained between employees and their organizations. Human resource of any organization is the most essential ingredient so they require be influencing and persuading towards tasks fulfillment.

There are very few organizations which consider that the employees are its main assets and employees can lead them to success. Unless the employees of any organization are motivated for the responsibilities fulfillment and goals achievements and encouraged, none of the organization can steps forward towards success.

The focus of this study is to discuss how an organization through its employees can achieve accomplishment and effectiveness. The purpose of the study is to analyze the impact of employees' motivation on organizational effectiveness and productivity.

The study has two sub-objectives; firstly the factors that increase motivation of employees are to be determined. Secondly the relationship of employee motivation and organizational effectiveness is to be examined.

### Literature review

Productivity is the key factor applied in various organizations. Productivity which is contained effectiveness and efficiency has become one of the favorites for each organization and industry due to limitation of available resources. Productivity Indicators are used for measuring the rate of promotion and determining the strong and weak points of each organization. These indicators are divided in external and internal categories. As per Gielen et al. 2006, external factors such as government passed legislation affect internal activities. Internal factors created by inside factors in any firms or organizations influence other unit's productivity. It is under manager's supervision that can improve productivity.

As per Cesen, 2000, one strategy for reaching ultimate goals and enlargement is motivation. Motivation is a key factor for progress within an organization or business. Employees, who are motivated, produce a high quality work.

As per Armstrong, 2006, A profound knowledge of motivation and its meaning is therefore essential for success and development. Furthermore, Organization's behavior will be led to fulfill individual and public goal by motivation.

Luthan (1998) defines motivation as, "a process that starts with a physiological deficiency or need that activates a behavior or a drive that is aimed at a goal incentive". (Ayeni & Popoola, 2007) According to De Cenzoet.

Existing studies in aimed at the effect of motivators and on job performance by Jibowo (2007). Daniel and Caryl (1998 in Kenya, Akerele, 2001) did not cover indeed, the areas that the objectives of this work covers. To this effect, this study attempts to empirically analyze how motivational tools can be used by manufacturing firms in Anambra State to effectively derive plans for growth and development.

Performance is the outcome of work (Bernadin, Kane, Ross, Spina, & Jhonson, 1995). But, the performance itself has different dimensions based on different bases (Beats & Holton, 1995). To measure and control the individual performance and thus integrating it to the organizational objective to achieve expected results (Boxall & Purcell, 2003) is certainly performance appraisal.

The strategic goal of the organization depends on individual performance through the interaction between three interlinked levels: (i) Organizational, (ii) Process, and (iii) Job (Rummler & Brache, 1995).

The administrative rationales are exercised based on appraisal report are salary administration, promotion, retention or discharge (Pattern, 1977; DeVries, et. al, 1981; Murphy & Cleveland, 1995).

The evaluative purpose encompasses increment decisions, incentives, bonuses, and in long term promotion decisions, identification of poor performers, determination of termination, lay-off (Snell & Bohlander, 2007).

The development purpose of appraisal includes identification of strength and weaknesses and providing feedback, thus identifying the developmental need of individual. , personnel research (Decottis & Petit, 1978).

Discussion about salaries during appraisal session contradicts and restrains the identification of developmental issues (Meyer, Kay, & French Jr, 1965; Prince & Lawler III, 1985). Austin & Villanova, 1992 reviewed criteria problem from 1917 – 1992 stated that criteria helps rater to find out the differences in job - role behavior among the employees and provides the basis of feedback.

The Criteria provide parameter on which employees' performance will be measured. The measurement of job performance provides bases for effective job design and to identify training need, and many other personnel – related actions and interventions M.K. Sanyal and S.B. Biswas / Procedia Economics and Finance 11 ( 2014 ) 182 – 196 185 (Borman, White, Pulakos, & Oppler, 1991) .

Employee motivation and engagement has always been a major concern for the research. Scope for

mutual goal setting, self-evaluation (Erez & Judge, 2001), multisource feedback (Lepsinger & Lucia, 1997), and motivates employee for better performance and improved productivity (Fletcher, 2001).

Borman, White, Pulakos, & Oppler, 1991, modified the model of Hunter, 1983, which examined a causal relation between job knowledge, task proficiency and supervisory rating, and established a relational model between Achievement orientation, personal ability, dependability, job knowledge, awards, task proficiency, disciplinary action and finally to supervisory rating.

The renowned two factor theory of Herzberg, 2003; Herzberg, Mausner, & Snyderman, 2009 established the Hygiene factors and motivators influencing better employee performance. Perceived appraisal accuracy by the employees is related to the system and process facets through the interaction of social and contextual performances (Findley, Giles, & Mossholder, 2000).

An exploratory model designed by Marcoulides & Heck, 1993, established the relationship between organizational structure/purpose, organizational values, task organization, organizational climate, worker attitude and the goal of organizational performance.

Patterson, et al., 2005, identified the organizational climate dimension variables employee welfare, autonomy, participation, communication, emphasis on training, integration, supervisory support involvement, formalization, innovation and flexibility, Reflexivity, clarity of organizational goals, efficiency, effort, performance feedback to managerial practices productivity and innovation. Trust as defined by, Mayer, Davis, & Schoorman, 1995, is the willingness to be exposed to the action of another party. Finally, Mayer & Davis, 1999, established positive relationship between trust for management and performance appraisal

## **IT industry and people management**

The common area addressed by the researcher about the people dimension of the software firms are high attrition (Budhwar, Varma, Singh, & Dha, 2006). The IT/ ITes/ BPO companies are trying to combat the issue of attrition through innovative HRM practices (Joseph, 2011) through pay satisfaction (Bhal & Gulati, 2007), concentrating on career development practices (Monis & Sreedhara, 2011), building hope at organization place to increase performance outcomes (Combs, Clapp-Smith, & Nadkarni, 2010) and also creating value (Murthy, 2007). A pioneering work has been done by Paul & Anantharaman, 2003, establishing relationship between HRM practices

and the organizational outcome mediated through competences, Team work, organizational commitment, customer orientation moderating employee retention, productivity, increasing product quality, speed of delivery, reducing operating cost in a software firm.

## **Objectives of The Study**

1. To analyze the influences and outcomes of motivation on employee performance.
2. To explore the extend up to which motivation has been able to meet employee prospect.
3. To examine the employee performance level bolstered by motivation.

## **Hypotheses**

**Hypothesis 1 - Ho:** Motivation has a great impact on employees' performances.

**Hypothesis 2 - Ho:** Motivation has an influence on the Employees job performances.

**Hypothesis 3 - Ho:** Motivation has relationship between Production and productivity.

## **Scope of The Study**

Scope of this study is limited to the management staff of the IT/ITes companies in Delhi/NCR. The survey was conducted on employees of different levels and on employees with different experience. It would improve employee relationship with top management.

## **Significance of the study**

Motivated employees are needed in our rapidly changing workplaces. As we are still a developing country, for our continuous growth, it is important that our economy is well governed and we can provide our maximum effort in workplaces, so we need know where are we standing right now in case of employee motivation and what else we need to do to ensure more efficient performance from our employee. We also need to compare with others to find out where they are for individual benefits. So, the significance of this study is undeniable.

## **Research Methodology**

Research Design- Descriptive & Empirical

Data Types – Here we have used both Primary & Secondary data.

Research Instruments - questionnaire

Sampling techniques – The sampling was done using simple random sampling,

## **Sampling design and size**

A sample of about 100 people was selected from the

target population, based on their designation and experience level.

**The sampling was done using simple random sampling,**

II/ITes	No. of Respondent
Convergys	20
Genpact Ltd	20
Wipro BPO	20
Tech Mahindra	20
R systems	20
Total	100

**Sample size** – The sample size of this research is 100. Among the 100 people we conducted our research on, 38 were female and 62 were male. Among 100 people we conducted research on, 35 individuals are of age 21-30 years, 38 individuals are of age 31-40 years, 27 individuals are of age 41-50 years.

Among 100 employees we conducted research on, 55 individuals are graduates and 45 individuals are Postgraduate.

Among 100 people we conducted research on, 32 individuals are serving between 0-4 years, 45 individuals are serving between 5-10 years, 23 individuals are serving more than 10 years.

Data analysis technique - Results were analyzed using descriptive statistical analysis method to find out how the motivational factors affect their performance

**Data Analysis & Interpretation**

**Effect of extrinsic motivation**

Statements	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
Salary	85	15	0	0	0
Incentive	71	12	8	5	4
Compensation	75	15	6	3	1

The factors we have taken as extrinsic motivation are Salary, Monetary Incentives and Compensation Package. The result showed that, extrinsic motivation is a dominating factor for motivation employees. Here, in case of salary, 85% respondents agreed that salary motivates employees to improve their performance; meanwhile, 10% agree with the fact, 0% are uncertain and 0% disagrees. In case of incentives, 71% respondents agreed that monetary incentives motivate employees to improve their performance; 12% agree with the fact, 8% are uncertain, 5% disagree and 4% strongly disagree. In case of compensation packages, 75% respondents agreed that compensation packages motivate employees to improve their performance; 15% agree with the fact, 6% are uncertain, 3% disagree and 1% strongly disagrees.

**Effect of job enrichment and performance appraisal in (%)**

Statements	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
work environment	83	10	5	1	1
promotion	74	18	6	2	0
appraisal	82	13	3	1	1

The factors we have taken for measure the effect of job enrichment and performance appraisal are work environment, promotion and recognition and appraisal for work done. Here, in case of work environment, 83% respondents agreed that work environment motivates employees to improve their performance; meanwhile, 10% agree with the fact, 5% are uncertain, 1% disagree and 1% strongly disagree. In case of promotion, 74% respondents agreed that promotion motivate employees to improve their performance; 18% agree with the fact, 6% are uncertain, 2% disagree and 0% strongly disagrees. In case of appraisal 82% respondents agreed that recognition and appraisal for work done motivate employees to improve their performance; 13% agree with the fact, 3% are uncertain, 1% disagree and 1% strongly disagree.

**Effect of authority to make decision and growth opportunity in (%)**

Statements	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
Authority to make decision	65	11	20	3	1
Growth Opportunity	82	10	4	2	2

Here, in case of Authority to make decision, 65% respondents agreed that authority to make decision motivates employees to improve their performance; meanwhile, 11% agree with the fact, 20% are uncertain, 3% disagree and 1% strongly disagree.

Here, in case of Growth Opportunity, 82% respondents agreed that Growth Opportunity motivates employees to improve their performance; meanwhile, 10% agree with the fact, 4% are uncertain, 2% disagree and 2% strongly disagree

**Findings of the Study**

The findings of this study are as follows:

1. Effect of extrinsic motivation on employee performance: It can be asserted with certainty that, extrinsic factors are great motivator as majority of the respondents thinks. So, an effective scheme of monetary and extrinsic rewards should be made
2. Effect of job enrichment and performance appraisal: If the working environment is good,

the employee will perform with more convenience and ease. Similarly, if the employee knows his/her good performance is being appraised by the top management and subordinates, then surely better performance can be expected.

3. Effect of authority to make decision: If the employees are given authority to take decision under their territories of expertise, then it may very well be used as an enormous motivation tool. They shouldn't be allowed to take decision outside their range of operation.
4. Effect of growth opportunity: If the employees feel that they have a great prospect in their respective organization, they will work with more efficiency. So this is also a great motivator.

### Conclusions

The present study explores that IT industry aspire excellence through the implementation of mutual goal setting, continuous monitoring of individual performances and integrating individual performances with team performances, involving line function in the appraisal method, focusing on innovative climate creation. The appraisal programs are conducted centrally by identifying the maturity level of the organization and categorizing the organizational objectives. Jointly with the line function the objective and strategies then integrated to the micro level by setting mutual goals and performance expectations. A causal linkage between the applications of appraisal and motivation of the employees are clear

We can conclude here that the factors taken into account during the survey rationally dominate employees' will to perform and achieve goals of the respective organization. The factors considered under extrinsic motivation are salary, incentives and compensation. Besides the factors considered under Job enrichment and performance appraisal are work environment, responsibility and promotion. There is the factors considered under Relationships and security are relationship with superiors, peers and job security. Moreover, Authority to make decisions, Growth opportunity and prospects were also considered. The result evidently represented the tangible sorting of how motivation is responsible for upliftment of employee performance. From what the researchers found it can easily be stated that the connection between motivation and performance is quite natural.

### References:

- Beats, R. A., & Holton, E. F. (1995). "Computerized Performance Monitoring: A review of Human Resource Issues". Human Resource Management

Review. Winter , 267 - 288.

- Bengal, F. d. (2011). Economic Review 2011 - 2012. Retrieved from www.wbfin.nic.in: www.wbfin.nic.in/writereaddata/EconomicReview11\_Part2.pd.
- Bernadin, H. K., Kane, J. S., Ross, S., Spina, J. D., & Jhonson, D. L. (1995). "Performance Appraisal Design, Development and Implementation". In G. R. Ferris, S. D. Rosen, & D. J. Bamum(eds), "Handbook of Human Resource Management". Cambridge: Mass, Blackwell.
- Bhal, K. T., & Gulati, N. (2007). "Pay Satisfaction of Software Professionals in India". VIKALPA. VOLUME 32 .NO 3 . JULY - SEPTEMBER 2007 , 9 - 21 .
- Blom, A., & Saeki, H. (2011). "Employability and Skill Set of Newly Graduated Engineers in India". South Asian Region: The World Bank.
- Borman, W. C. (1979). "Format and Training effects on Rating accuracy and Rater Errors". Journal of Applied Psychology. Vol. 64. No. 4. , 410 – 421.
- Borman, W., White, L. A., Pulakos, E., & Oppler, S. (1991). "Models of Supervisory job Performance rating". Journal of Applied Psychology. Vol 76. No. 6 , 863 – 872.
- Boswell, W. R., & Boudreau, J. W. (1997). "Employee Attitudinal Effects of Perceived Performance Appraisal Use". NY: Cornell University: Center for Advanced Human Resource Studies.
- Bourne, M., Mills, J., Wilcox, M. N., & Platts, K. (2000). "Designing, Implementing and Updating Performance Measurement Systems". International Journal of Operations and Production Management. Vol. 20. No. 7 , 754-771
- Brown JF, Ballard BJ, Cress MM (1982) Employee motivation and productivity Montana State Library, USA.
- CIPD (2015) Resourcing and Talent Planning (Recruitment, Retention and Turnover). An annual report.
- Herzberg F (2003) One more time: How do you motivate your employees? Harvard Business 81: 87-96.
- Investopedia (2015) What are the advantages and disadvantages of stratified random sampling?
- Jones G, George J (2016) Contemporary Management. 9thEdn, McGraw-Hill Education, Australia.
- Lindner JR (1998) Understanding Employee Motivation, JOE 36: 1077-5315.
- Mullins LJ (2005) Management and Organizational Behavior. 7thEdn, Pearson Education, UK
- Neely, A., Mills, J., Platts, K., Richards, H., Gregory,

- M., Bourne, M., et al. (2000). "Performance Measurement System design: developing and testing a process based approach". *International Journal of Operations and Production Management*. Vol. 20.
- Organ, D. W. (1997). "Organizational Citizenship Behavior: It's Construct Clean - Up Time". *Human Performance*. Vol. 10. No. 2 , 85 - 97.
  - Pattern, T.J. (1977). "Pay: Employee Compensation and Incentive Plans". London: Free Press.
  - Patterson, M. G., West, M. A., Shackleton, V. J., Dawson, J. F., Lawthom, R., Maitlis, S., et al. (2005). "Validating the organizational climate measure: links to managerial practices, productivity and innovation". *Journal of Organizational Behavior*. Vol. 26 , 379–408.
  - Paul, A. K., & Anantharaman, R. N. (2003). "Impact of people management practices on organizational performance: analysis of a causal model". *Human Resource Management*. Vol. 14. No.7. November , 1246–1266.
  - Prince, J. B., & Lawler III, E. E. (1985). "Does salary discussion hurt the developmental performance". *Organizational Behavior and Human Decision Process*. Vol. 37. Issue 3 , 357 - 375.
  - Rummler, G. A., & Brache, A. P. (1995). "Improving Performance: How to manage the white space on the organization chart (2nd edn)".
  - Saks AM (2006) Antecedents and consequences of employee engagement. *Journal of Managerial Psychology* 21: 600-619
  - San Francisco: Jossey - Bass. Singh, A. (2013). "Perception of Software Professionals regarding Performance Management Process: An exploratory Study". *Vikalpa*. Vol. 38. No. 2. April - June, 39-60.
  - Seleste L (2009) Survey Analysis: Employee Motivation by Generation Factors.
  - Singh, A. (2011). "Performance Management Systems in select organizations: An Evaluative Study". Delhi: Delhi University
  - Wellins RS (2015) Employee Engagement: The key to realizing competitive advantage.



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