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Dr. Subodh Kesharwani
Editor-in-chief

Block Chain a Peer-to-Peer Network: A Holistic Study from Research Firm to Corporate House

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Kedar Amar Research and Academic Management Society

Kedar Amar Research and Academic Management Society known for it's acronym KARAM Society has been established in the year 2009 keeping in dream the empowerment and comprehensive expansion needs of society. The society has been established as a "Not for Profit" Company under the societies registration act, 1860 with a Registration no. S/65067/2009. In the present state -of-affairs, the KARAM Society engaged in the advancement of medical knowledge and provision of assistance to medical students and professionals.

The mandate behind KARAMS is to make certain transparency, accountability and adherence to corporate governance norms. Recently KARAM Society had put it's ware bouts in an online publishing and collaborated with Open Journal Inc. and Publishes two hard core empirical research journal on information systems (www.gjeis.org) and in medical science (www.agems.in). Both the Research journals are now available in a Brick-&-Mortar mode also with an ISSN and eISSN Numbers respectively. The rationale of the KARAM Society is to promote empowerment and inclusive development with an emphasis on social, digital and financial inclusion; strengthening of delivery systems and participatory democracy for bringing about a systemic change to help meet development objectives better. During the past two decades founder members of KARAM Society have travelled transversely the country to learn critique and encourage social, digital, medical and financial inclusion. In the process, knowledge repositories have been created on what works—the most excellent practices—actively engaging all stakeholders from policy makers and civil society to ordinary citizens. The KARAM will allocate this knowledge for progression and nation-building all the way through e-learning modules and virtual platform for practitioners and publishing video documentaries on our portals. Recently it had started new portal http://open-journal.com which is backed by the gamut of great academician from different part of the world.

In the last few years KARAM Society conducted numerous health camps in a charitable mode in a various districts of Haryan, Rajasthan, Uttarpradesh, New Delhi, etc. which are organized with support from corporate, civic bodies, the government, NGOs and individual volunteers. KARAMS has conducted over 75 general health camps till date and has benefitted more than 25, 000 people directly. In line with the policy to provide healthcare services to the community around our facilities, KARAM Society has started a Mobile Medical launched Mobile Medicare Unit (MMU hereafter) to address the health concerns of older persons living in urban slums. Technical aids are provided to the poor elderly that could improve their quality of life and make them independent. Eye camps are organized every year now and then to screen beneficiaries for cataract. Awareness about diseases and healthy living is an important component and constant effort by KARAM Society is being made in this direction. The team of KARAM SOCIETY India consists of a medical doctor, a community health mobilizer, a pharmacist and a social protection officer. The team will not only provide curative medical services but will also raise public awareness on preventive and promotive aspects through awareness generation and multi-disciplinary medical camps, etc.

KARAM Society best practices have been documented as information cards, video case studies, policy and white papers that are consistently shared with group of people at great, so that it can become a wider learning process. Having done all the above driven by individual enthusiasm and excitement, the members now felt the need to create an institutional framework that not only takes this work forward and emerges as a key expansion institution but also helps in facilitating implementation mechanisms such that the benefits of wide-ranging development are actually received by society.

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Implication Propose from Editor's Offset

Block chain a peer-to-peer network: A holistic Study from research firm to corporate house

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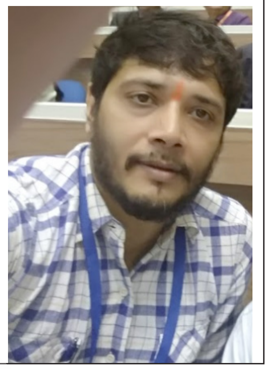

Abstract

The blockchain, the technological innovation reinforcement the recognizable cryptocurrencies bitcoin, has progressively more the subject of academic and public question. In present circumstances it has become buzzword in a future too. Blockchain technology, first functional in the blueprint of Bitcoin in 2008, emerged from a movement of anarchists, computer scientists and crypto aficionado who aphorism the impending of the technology as a breakthrough in the long anticipated apprehension of an old "cypherpunk" dream of money that is free from the control of the state which also in a judicial language was considered as a legal tender and other third parties, such as commercial banks. The main aim of the research is to elucidate the concept of blockchain in a holistic manner vis-à-vis peer-to-peer network management by taking into consideration Internet of Thing (IoT), cryptocurrencies and bitcoin, positive etc. The study also highlights the impact of blockchain in a management perspectives. The paper also demonstrates how blockchain management with IoT will offer opportunities to the organizations and how it will impact their future competitiveness and market share and it exhibits various other issues relating to blockchain.

Keywords: Blockchain, Bitcoin, Cryptocurrency, Distributed Ledger, Peer-to-Peer, Technology

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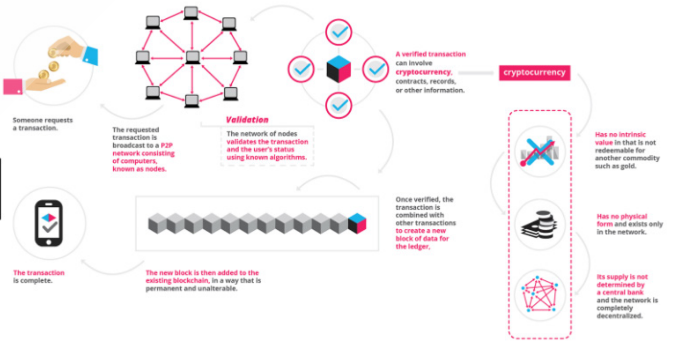
1. Preamble

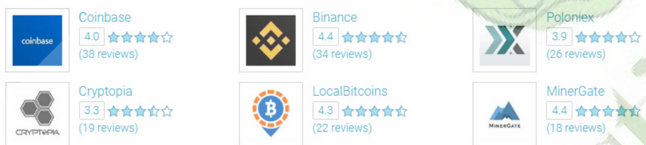
According to the market research, it is establishes that only 0.5% of the world's populace are using blockchain in the current day, but 50% or 3.77 billion people use the internet, so there is an occurrence to saunter ahead of the world and learn Blockchain. Few community be acquainted with, but crypto currencies emerged as a side creation of another establishment. Satoshi Nakamoto, the imprecise inventor of Bitcoin, the first and at a standstill most noteworthy crypto currency, never projected to instigate a currency. In his announcement of Bitcoin in late 2008, Satoshi said he urbanized "A Peer-to-Peer Electronic Cash System". His goal was to invent incredible; many people failed to stimulate before digital cash. What's happening today with crypto currency is reminiscent of the website blast during the early nineties. Individuals putting resources into tech organizations and fiercely aspiring thoughts of a progressively inter linked future were making money by the heaps overnight. Internet stocks climbed like fervent, and all of it was based on guesswork. Most of the technology was yet to be adopted at scale, but everybody was gambling big that one day it would exist and create a boom. It is projected across the government field will additionally acclimatize or generate some type of virtual currency by 2030. Crypto currency is a currency that exists digitally or virtually and utilizes cryptography for protection. It is complicated to be forged in light of this security trait. Numerous crypto currencies are decentralized frameworks dependent on blockchain innovation, a dispersed record upheld by a divergent system of computers.



Source: https://blockgeeks.com/guides/what-is-blockchain-technology

*Author for correspondence

The first crypto currency to capture the public eye was Bitcoin, which was propelled in 2009 by a person or a group recognized beneath the pseudo name, Satoshi Nakamoto. There were over 17.53 million bitcoins in movement at the latest by February 2019, with an overall market estimation of around $63 billion (in spite of the fact that the market cost of bitcoin can change a lot with a change in time/technology and change in demand and supply). Why? Because compared to regular fiat options, crypto currency offers reduced defrayal times, better traceability, and enhanced effectiveness. Apart from that, crypto currency may be backed by tangible assets, and a choice of controls can facilitate maneuver its price falsely. Blockchain is the world's most trusted all-in-one crypto company. There are certain Crypto currency Softwares out of which some of the popular Crypto currency products are used by Blockchain professionals. Bitcoin's accomplishment has given birth to many competing crypto currencies, known as "alt-coins" such as Litecoin, Namecoin, Peercoin, Ethereum, EOS, and Cardano. Nowadays, there are truly a huge number of digital forms of money in presence; with a total market estimation of over $120 billion (Bitcoin as of now speaks to over half of the overall value). Some of nomenclatures used in a bitcoin are mentioned below.

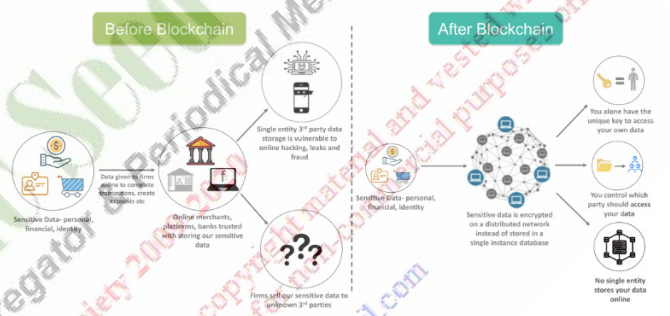


1.1 Benefits and Drawbacks of Crypto Currency

Cryptocurrencies have the certification of making it less demanding to move reserves unswervingly within two parties in an operation, without the requirement of a trusted outsider, for example, a bank or credit organization; these exchanges are encouraged using public keys and private keys in light of maintaining security. In current digital currency frameworks, a client's "wallet," or online address, has the public key, and the private key is utilized to sign exchanges. Fund exchanges are set up with insignificant processing expenses, enabling clients to evade the precarious expenses charged by most banks and monetary establishments for wire exchanges.

2. Curtain Raiser to Block Chain

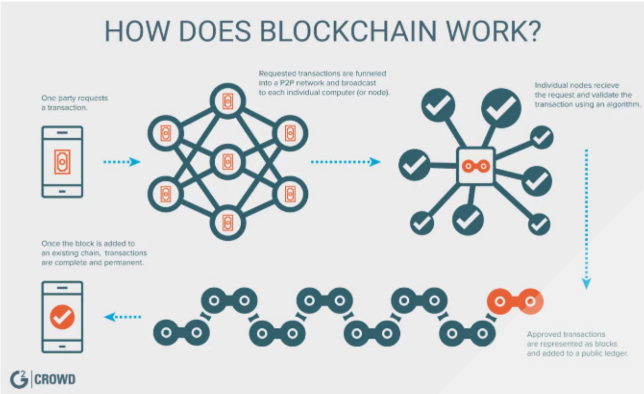
Blockchains are protocols which synchronize financially viable motion. A set of rules is a tradition that facilitates trusted communication between agents separated by boundaries of possible distrust-boundaries which can be technical (different operating systems and imperfect transmission networks), geographic (global distance), political (states and national borders), or cultural (different languages, ethnicities or ideologies). A successful modus operandi creates a distributed system-or network-which agents enter or egress by adhering to the rules of the protocol. Blockchain is in concert an overriding role in terms of technology in the market. Banking isn't the only trade that could be exaggerated by blockchain tech. Supermarkets, energy resources; healthcare, softwares, Education, voting and many other sectors could also slot in blockchain in their expectations. With this, you can begin with the shift process and make sure that dealings at the platform of Blockchain are maintained and ubiquity value is also determined. In the below image, you can see how blockchain infrastructure eliminates the necessitate for any single entity to maintain and stock up the sensitive data (including you). So, if Blockchain can steadfastness all these tribulations then why not learn to use it?



Source: https://www.edureka.co/blog/top-10-reasons-to-learn-blockchain

3. Journey of Block Chain

Blockchain was designed by Stuart Haber and Scott Stornetta in 1991 as a way to guarantee the trustworthiness of digital records. Haber and Stornetta propelled the world's first business blockchain. A Blockchain is a technique for making an index of entries, which cannot be changed after they are made. This likewise applies to the index. This is achieved by utilizing a few ideas from cryptography, incorporating digital signatures and hash functions. On the off chance that this innovation is so intricate, why call it "blockchain?" The essence of blockchain is truly only a chain of blocks, however not in the customary way. When we state the words "block" and "chain" in this unique circumstance, we are really discussing computerized data (the "block") put away in an open database (the "chain").

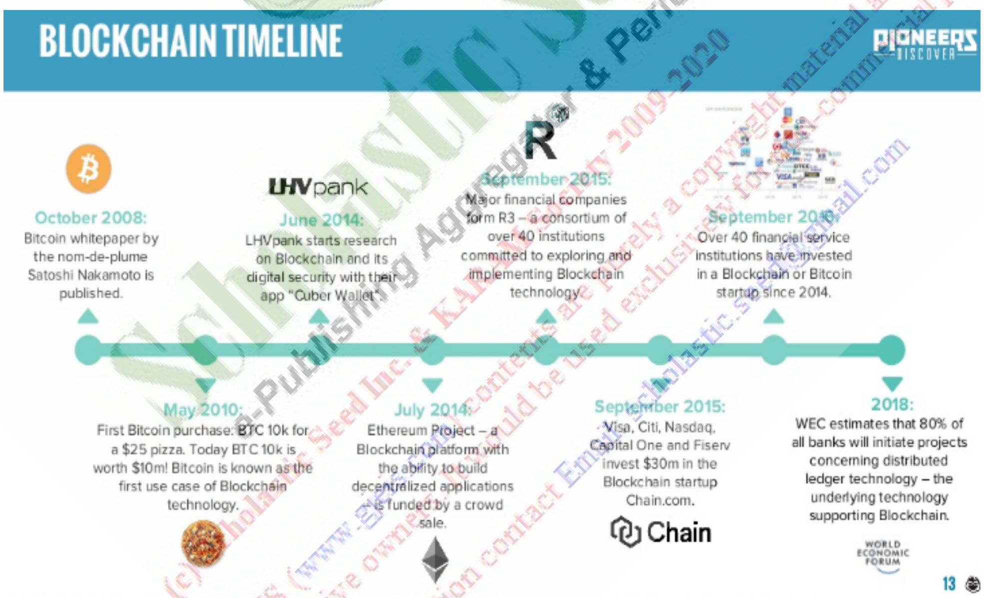


Source: https://www.g2crowd.com/categories/blockchain

While the block in the instance on top of is being utilized to store a solitary purchase from online business, the fact of the matter is a slight disparate. A solitary block on the blockchain can in truth contain up to 1 MB of information. Contingent upon the span of the exchanges, that implies a solitary block can have a couple of thousand exchanges under it. "Blocks" on the blockchain are comprised of virtual snippets of data. In particular, they have three sections:

- Blocks store data about exchanges, for example date, time, and amount of your latest buy from online business.
- Blocks store data about who is taking an interest in exchanges. Rather than utilizing your real name, your buy is recorded with no identifying data utilizing an unique "digital signature," similar to a username.
- Blocks store data that contrasts them from different blocks. Much like different people having different names to differentiate them from each other each block stores a special code called a "hash" that enables us to separate it from other blocks.

Blockchain system in crypto currencies has made the transactions quicker and easier but also has thickened the roots of dark net markets. The anonymity provided by the crypto currencies makes it difficult for the government to trace out the transactions and find out the assets a person holds. Thus weakening the government. But since the technology has kept on evolving over the decades there are high chances of this technology to be used in the future only if certain improvisations are made.

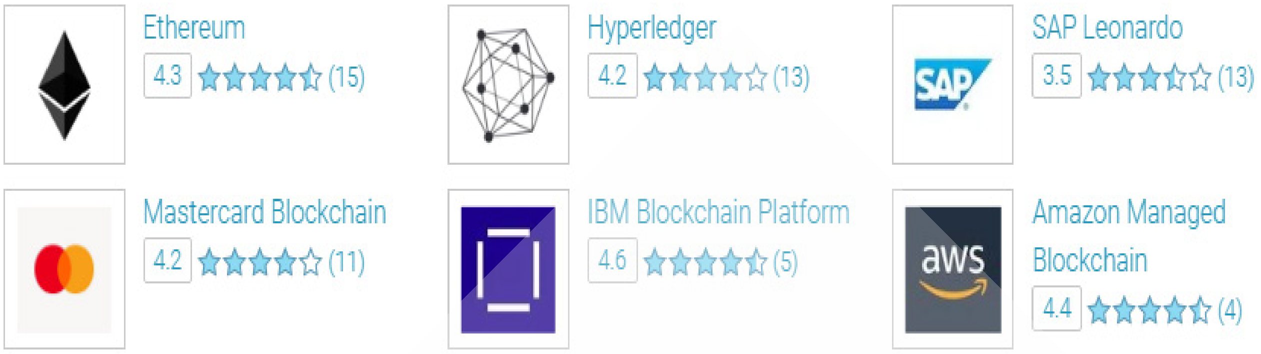


Source: https://blog.g2crowd.com/blog/trends/cybersecurity/2018-cs/blockchain

3.1 Blockchain Platforms Software

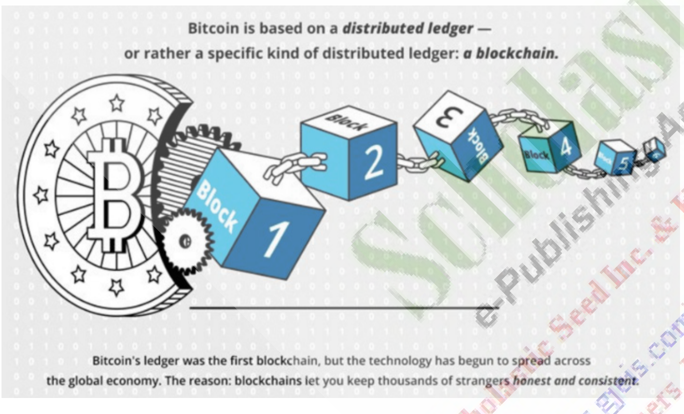
Industry Blockchain innovation can be connected to a wide scope of enterprises and applications, however not every one of them but finance, logistics, real estate, medicine and retail sectors have regular use. Enterprises depending intensely on installment handling and money related exchanges have the most widely recognized utilizations for blockchain innovation. The public record streamlines the procedure, facilitates documentation, and lessens misrepresentation. Logistics organizations can profit by expanded documentation of costs, labour, armadas, and shipments. Medical insurance suppliers and different organizations holding a lot of important data can improve information security utilizing blockchain innovation. Different businesses can use blockchain innovation also, but they need to think about discovering precedents beforehand.

Blockchain Platforms products used by Blockchain professionals



4. Bitcoin

Bitcoin was introduced in 2009 and turned into the herald to one of the best advancements ever Blockchain. It was something nobody at any point thought about. Blockchain shed its digital currency skin in 2012 when Vitalik Buterin planned and sent Ethereum- the first open blockchain stage. Several blockchain stages have been presented from that point forward and they are currently changing the manner in which most innovations work.

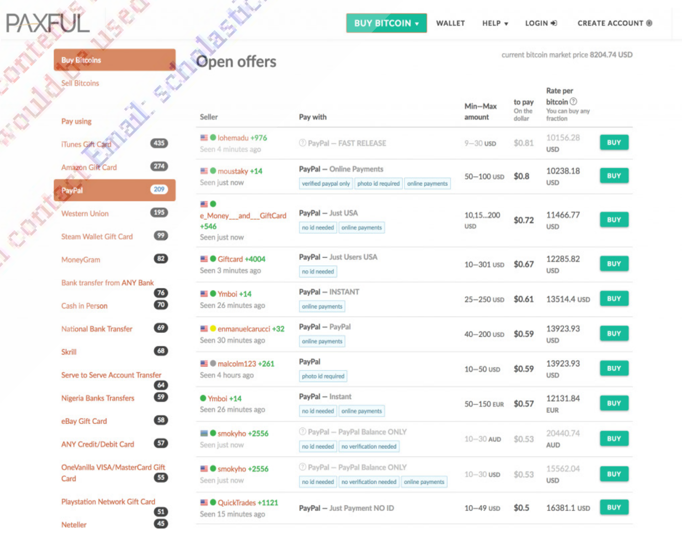


Source: https://www.investopedia.com/terms/b/blockchain.asp

More organizations worldwide, including Shopify, WordPress, Subway, are embracing crypto as a payment option. This trend is likely to become more common as the days go by. At the moment, accepting bitcoin gains a company positive attention from the media and presents the image of being ahead of the competition. With more firms choosing this payment gateway, consumers will not take kindly to any company that refuses bitcoin. Bitcoin understood this issue by fixing the most extreme number of Bitcoins that would ever be in transmission and the rate at which new Bitcoins would be curved. The greatest number and the rate of generation can't go astray from the set limit as a result of the coding utilized in its blueprint. Further, in order to make certain that no more Bitcoins could be manufactured, the code is made available to all and sundry for less cumbersome authentication thus it is where the block chain played a vital role in streamlining a process.

4.1 How to Buy Bitcoin: A Pictorial and Snapshot of a Transaction with PayPal on Paxful

Much like Local Bitcoins, Paxful is a peer-to-peer bitcoin exchange. You create an account and browse the buyer and seller offers. Once you've agreed to a trade with another user, the seller sends their bitcoin, and the buyer sends their dollars (or other currency) to escrow. After the trade has been confirmed, the funds are released to each party.



Source: https://d1ic4altzx8ueg.cloudfront.net/finder-au/wp-uploads/2017/11/Paxful-PayPal-1024x737.png

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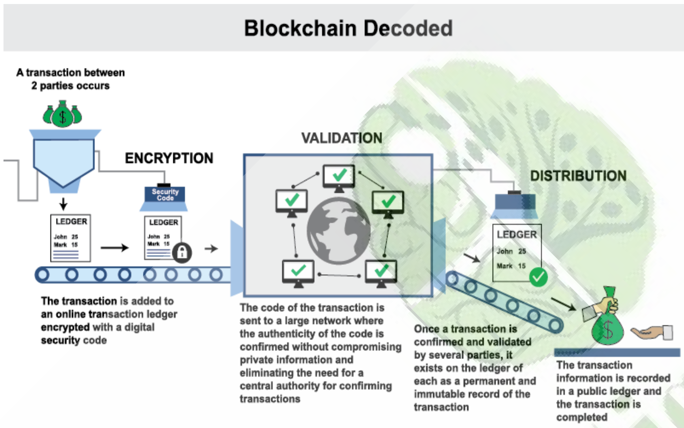
4.2 Distributed Ledger Technology

A disseminated record is a database that is unanimously shared and synchronized over various sites, establishments or topographies. It enables exchanges to have open "witnesses," consequently making a digital attack increasingly sinuous. Blockchain is one sort of a circulated record. Circulated records utilize autonomous PCs (alluded to as nodes) to track, split and blend exchanges in their particular electronic records (rather than information being unified in a tradictional record). Conveyed records offer a variety of advantages to government and to other open and private division associations. As the name entails, they can be scattered very broadly in an exactly controlled manner.



Source: http://www.sachsinsights.com/santanders-innoventures-distributed-ledger-challenge-decoding-blockchain

They are exceedingly well-organized as changes by any applicant with the obligatory authorization to adapt the record are instantly shown in all copies of the record. They can be consistently strong in dismissing unlawful changes, so undermining the record is hugely difficult. Then again, appropriated records ought not to be viewed as an end in themselves. It is just when they have different applications-, for example, smart contracts- layered with them, that their maximum capacity can be figured it out.

- **What is the difference between DLT and Blockchain?:** It is less difficult than it may seem. A blockchain, a chain of blocks, is a kind of DLT. Blockchain is nothing except for a DLT with a particular arrangement of attributes. It is a mutual database- a log of records- however for this situation shared by blocks that, as the name suggests, structure a chain. Blockchain is in reality a type of disseminated record with an unmistakable innovative supporting. As we know, it is one that makes an unalterable track of records that is kept up by a decentralized system, where all records are endorsed by accord.
- **How the new bitcoin released?:** It was resolute that the new Bitcoins would be discharged at a speed that was constantly lessening. This implies as the quantity of Bitcoins on the planet builds, the quantity of recently framed Bitcoins would decrease and creation would end up rarer. This was done to motivate the investors at the onset and provide an incentive to individuals who came to experiment with Bitcoin first. The underlying rate of discharge was chosen to be 50 Bitcoins at regular intervals of 10 minutes. This was strong willed arbitarily and it was additionally iron-willed that this rate would get split into two halves like clockwork every four years (also picked subjectively). When you play out the number juggling, it indicates an aggregate of 21 million Bitcoins that would be in stream continuously by 2140.
- **Crypto currency will become an everyday payment medium:** More associations around the world, including Shopify, WordPress, Subway, are holding onto crypto as a payment substitute. This pattern is almost certainly going to wind up more archetypal as the days pass by. Right now, accepting bitcoin gains an organization positive deliberation from the media and presents the picture of being in front of the antagonism. With more firms picking this installment gateway, customers won't affectionately embrace any organization that rejects bitcoin. Cryptographic marking and connecting groups of records in the record, to frame a chain is the thing that sets blockchain separated from DLT. Additionally, contingent upon the particular use of blockchain, there is the open door for general society and clients to have a state in how it is organized and run.

5. What's the Future of Blockchain in India?

Blockchain technology is not limited only to the sphere of the financial sector. There are many instances where Blockchain technology has been effectively used by different nations for different purposes. There's no point in doubting the future of blockchain technology as projects based on blockchain are making a great change in the current scenario of the world. Moreover, cryptocurrencies like Bitcoin Cash, ETH, XRP, EOS, Litecoin etc. have gained the attention of the audience in terms of projects with high potential.

Different areas where the Blockchain Technology can be applied are

- Banking and Finance
- Insurance
- Media and Entertainment

- Medicine
- Public Sector
- Auto Industry
- Retail and Ecommerce
- E-learning and Blended learning

Thus, it is well evident that the years to come Blockchain are going to be the major sphere of revolution in the form of digitization. So by gaining an effective knowledge in the sphere of Blockchain technology, it will be greatly helpful in securing a bright career future providing numerous opportunities for enhanced career growth.

6. Highlights of Blockchain Training from Open Source Technologies

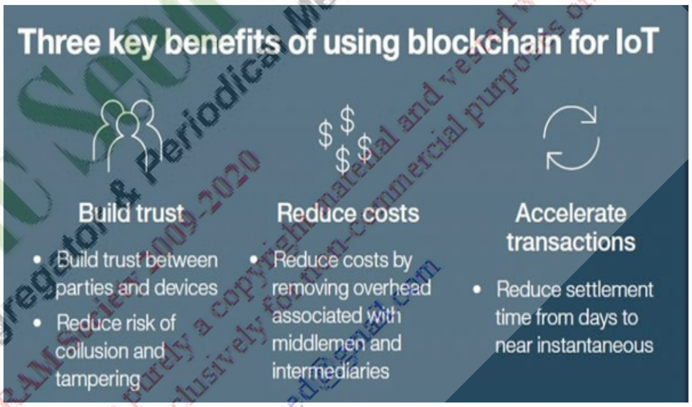
The main highlighting features of the Open Source Technologies Blockchain training program are

- Complete job oriented training.
- Real time Blockchain technology working professionals as the training faculty.
- The best lab infrastructure.
- Complete practical oriented training.
- Assistance in resume preparation & interview scheduling.
- Affordable course fee.

6.1 Blockchain will make a Splash in the IoT Sector

The Internet of Things (IoT) is a quickly developing industry bound to change over homes, urban communities, homesteads, farms, industries and for all intents and purposes everything else by making them brilliant and efficient. As indicated by Gartner, by 2020, there will be in excess of 20 billion associated things over the globe, fueling a market that will be worth more than $3 trillion. By 2019, 20% of all IoT organizations will have essential dimensions of blockchain administrations empowered (IDC). These both are a part of our current lives. According to a study, Blockchain will make 3.1$ Trillion in the business value of 2030. And also, the IoT will make 457$ Billion by 2020. Attempts are being made for the smooth transition of blockchain technologies into everyday life and business processes.

One of the major reasons is security- the trustless and encrypted blockchain serves as a viable choice for keeping the increasing number of home and office devices safe. In fact, blockchain might be utilized for guarding smart homes against malicious digital entities trying to break in and loot their precious data. Cryptocurrencies developed using blockchain technology is also suitable for micro-transactions between machines. Not only do they record machine activity for analytical and record-keeping purposes, but the machines are also capable of playing each other if the smart devices operated by an organization transact and interact with those of others. Though this is still distant, breakthroughs and research in this avenue continue right now. Blockchain has been noticed by basically all research firms as a rapidly quickening movement and it's not just about monetary organizations. The possibility in which we started upon blockchain goes beyond its initial digital currency roots in particular FinTech or Financial technology. Indeed, the intersection of blockchain and the Internet of Things is on the agenda for various organizations and there are existing executions, arrangements and activities in significant number regions, outside of IoT and money related administrations as well.



Source: https://www-01.ibm.com/common/ssi/cgi-bin/ssialias?htmlfid=WW912350USEN

It is thought that by 2025, there is going to be an extra 80 billion inter-linked devices around the sphere. Blockchain can help IoT machines radically get better industries such as agriculture, manufacturing, transportation and as well as consumer-based applications. Collecting and controlling data from such recently originate networks will facilitate civilization congregate better insights and make better choices about how to optimize life, or augment cost-efficiency of a meticulous process. On the other hand, as these networks grow and get extra stylish, with potentially millions of analogous devices joining a particular network, new methods of network administration and scalability will have to be made-up in order to smooth the progress of the traffic that will take place.

7. How Top Corporate are Using Block Chain

S. NO.	USE OF BLOCK CHAIN BY CORPORATE	HOW TO EXECUTE	LINK TO GET MORE DETAIL
1.	Fujitsu Limited and Fujitsu Laboratories have used blockchain	The Japanese company says the system will allow electricity consumers to efficiently exchange any energy surpluses they may have through their own electricity generation or power savings during shortages and surplus. Working alongside Japanese energy firm ENERES Co., Fujitsu has already used the system in a simulation.	http://www.fujitsu.com/be/microsite/blockchain
2.	IBM and Vodafone propel fresh European endeavour aiming on cloud, 5G and AI	IBM is propelling a fresh endeavor in collaboration with the mobile operator Vodafone focused at improving Europe's 5G, artificial intelligence (AI) and cloud capabilities. Vodafone will be able to use all of IBM's cloud services whilst the telecommunications conglomerate will provide mobile infrastructure like 5G.	https://www.ibm.com/downloads/cas/OXOY1OWZ
3.	Microsoft Is Linking Its Prime Items to Blockchain	Three years preceding, Microsoft Azure was the foremost to communicate blockchain to the cloud. At the moment it's interfacing the innovation to pretty much everything in addition. The software giant has inconspicuously been building spans between its blockchain administrations and other, roughly utilized framework and stages, for example, Office 365 Outlook, SharePoint Online, Salesforce, Dynamics 365 CRM Online, SAP, and significantly Twitter, as indicated by Matt Kerner, the general manager of Microsoft Azure. The consideration is to authorize Microsoft clients to port their information from these stages into the cloud, and from that position onto a blockchain.	https://www.coindesk.com/microsoft-is-slowly-but-surely-connecting-blockchain-to-major-products
4.	Ethereum is a decentralized stage that operates smart contracts: applications that run precisely as customized with no probability of downtime, oversight, and misrepresentation or outsider obstruction.	Ethereum is an open-source, blockchain-based dispersed processing platform and working framework including smart contract usefulness. It underpins an altered form of Nakamoto accord by means of exchange based state advances.	https://www.ethereum.org
5.	Infosys Finacle Initiates Blockchain Based Trade Finance Solution	Infosys Finacle is a part of EdgeVerve Systems, an ancillary of Infosys (NYSE: INFY), affirmed the worldwide accessibility of Finacle Trade Connect, a blockchain based exchange finance solution for banks. The agreement will assist digitize the exchange money business process, including endorsement of proprietorship, ensuring reports and making installments, while taking a shot at a circulated, trusted and shared system. The understanding is easy to get to for a scope of capacities, including Bill Collection, Letters of Credit, Open Account for Trade, C2C Transactions for Trade, B2C exchanges for Trade, PO Financing and Invoice financing. Infosys Finacle additionally propelled a pilot trade money network for banks to trial the Finacle Trade Connect arrangement. 11 banks have banded together with Infosys Finacle to be on the system.	https://www.infosys.com/newsroom/press-releases/Pages/finacle-trade-connect-solution.aspx

S. NO.	USE OF BLOCK CHAIN BY CORPORATE	HOW TO EXECUTE	LINK TO GET MORE DETAIL
6.	IBM teamed up with Aetna, Anthem, HCSC and PNC Bank to build blockchain-based healthcare system	Through the partnership, the companies aim to create a blockchain system where they can develop, share and deploy solutions that accelerate digital transformation in the healthcare industry. IBM says that the blockchain technology will reduce administrative errors ensuring that healthcare information is shared efficiently. It will also help to enhance patient care and reduce excessive costs.	https://www.ibm.com/in-en/blockchain
7.	Blockchain on AWS will create scalable blockchain and ledger solutions	AWS gives the least complex approach to fabricate adaptable blockchain systems and record applications for your business and encourages in AWS' blockchain administration which makes it simple to setup, send, and oversee versatile blockchain systems, wiping out the requirement for you to depend on costly counseling usage.	https://aws.amazon.com/blockchain
8.	Google Is Working on Its Own Blockchain-Related Technology.	Google is dealing with blockchain-related innovation to help out its cloud business and head off face up to from developing new businesses that use the energetically advertised innovation to work online in new ways, as indicated by individuals acquainted with the circumstance. The Alphabet Inc. unit is building up its very own conveyed digital record that outsiders can use to post and confirm exchanges, one of the general populace said, *"Alphabet Inc, is an American multinational conglomerate headquartered in Mountain View, California. It was created through a corporate restructuring of Google on Octobar 2, 2015, and became the parent company of Google and several former Google subsidiaries."*	https://abc.xyz
9.	SAP Leonardo is a blend of clever advancements, administrations, and industry skill that can enable you to upgrade your procedures and assets – and touch off development in any zone of your business	SAP Leonardo intelligent technologies, from machine learning and the IoT to advanced analytics, and see how they work together on an open cloud system. SAP Cloud Platform, the establishment for SAP Leonardo, is an open, extensible PaaS that facilitates you to make cutting edge applications. It offers a scope of microservices, open APIs, and access to the most recent advancements.	https://www.sap.com/india/products/leonardo.html
10.	Mastercard Blockchain opens doors for the computerized exchange of significant worth. Mastercard Blockchain APIs are exploratory and accessible for chosen testing with accomplices	Mastercard Blockchain encourages opens doors for the advanced exchange of significant worth by enabling organizations and money related foundations to trade on a conveyed record. Their innovation can control different use cases and can help take time, cost and risk out of money related streams. Blockchain nodes, characterize your very own exchange types, and deal with your support in a blockchain system.	https://developer.mastercard.com/product/mastercard-blockchain

S. NO.	USE OF BLOCK CHAIN BY CORPORATE	HOW TO EXECUTE	LINK TO GET MORE DETAIL
11.	Watson IoT and Blockchain: Disruptor and game change and work how IoT delivers the data. AI powers the insights. Use the leading IoT platform and industry intelligence to maximize the value of your connected assets. Let's put smart to work.	A private blockchain configuration of dispersed peers that replicate the gadget information and approve the exchange through smart contracts. A consent blockchain that makes it imaginable to characterize who to can join—permitting members in a business system to see just what they've been offered rights to perceive on the blockchain.	https://www.ibm.com/in-en/internet-of-things 
12.	Why Mark Zuckerberg just put some of his best execs on blockchain. Facebook, Telegram, and Signal are all reportedly working to get their cryptocurrencies to market.	The full node is able to validate transactions all the way back to the first block, at the time of publishing, the entire blockchain is getting on for 200GB in size. Some estimate that there are over 10,000 operational full nodes on the Bitcoin network.	https://www.facebook.com/blockchain 

7.1 What Block Chain is doing as a Whole in a Contemporary World and Creating a Miracle?

- "Blockchain empowers the next step – enabling a single, authentic data set shared across counterparties. This is already improving the way transactions happen," as said by Kerner to CoinDesk, adding and strengthening data analytics."
- Blockchain is creating a cooperative trade procedure which is proceeding from email, voice calls, video calling, phone calls, spreadsheets and into a unitary framework with a singular view on the information that all of the members can depend upon and trust.
- Distributed Ledger Technology (DLT) in a cloud situation is that which stores up information from different organizations in an institutionalized configuration at scale.
- Insurwave, which tracks freights and alters insurance premiums continuously, groups a wide range of information, everything from internet of things (IoT) sensors checking temperature, to whether the ship is going to hit a tempest, or enter a war region or a region vigorously populated with pirates.
- A successful blockchain platform will eventually secure a rich, validated set of transactional data unmatched anywhere else within the industry and it will enable market participants to be firmly in control of when with whom, and how much they share.
- In blockchain processes, there is a difference between the preparation of the information and the process of verifying and agreeing it represents the truth.

8. Block Chain Utilization by Corporate Houses: Some Facts

- A cross-border, blockchain-based, self-sovereign character standard will rise for people, just as physical and virtual resources by 2030.
- A race is going on among the four most esteemed organizations on the planet (in view of securities exchange valuation) with respect to which one will be the first to achieve one trillion dollars in esteem. Apple, Amazon, Alphabet (Google), and Microsoft are in a race to the "4-comma club."
- Amazon Quantum Ledger Database, or QLDB – make that big appearance. That offering is being showcased as a fundamentally less demanding approach to manufacture cryptographically ensured databases, and Amazon is wagering that sometimes, clients will lean toward that to any sort of blockchain arrangement.
- Australian media transmission giant Telstra is another organization utilizing blockchain innovation to verify savvy home IoT system. Cryptographic hashes of gadget firmware are put away on a private blockchain to limit check time and acquire ongoing alter resistance and alter location.
- Bitcoin peer-to-peer with PayPal facilities in buying and selling.

- Blockchain-based self-sovereign character stages will give the disappointed populace devices to acquire and keep up legal documentation.
- Brave is an internet browser based on the Ethereum blockchain which associates advertisers, publishers and readers utilizing Basic Attention Token (BAT) tokens. Actually, the stage, worked by Mozilla's previous CEO Brendan Eich, raised $35 million under 30 seconds.
- By 2030, most governments world over shall be making or adopting some type of digital currency.
- Citing dependable sources, Bloomberg is revealing that Google is wanting to make its very own blockchain and offer cloud and value-based administrations through it.
- Cryptocurrency issuer Pundi X teased its upcoming XPhone handset – a device it calls "the first blockchain phone."
- Ethereum blockchain or particular 'tokens, for example, IOTA concentrated on IoT applications and GDPR agreeable records, similar to the Sovrin record, for identity management.
- Facebook already has about a dozen people working on blockchain and digital currency, it was previously reported. The team is led by former Facebook Messenger Head David Marcus, who was also previously a board member at Coinbase.
- Facebook is building a stablecoin – a type of cryptocurrency designed to bypass the effects of price volatility, which characterizes the likes of Bitcoin.
- Filament, a startup that gives IoT equipment and programming to mechanical applications, for example, agro, manufacturing, assembling, and oil and gas businesses. Filament's remote sensors, called Taps, make low-control independent mesh networks that empower the organizations to oversee physical mining activities or water streams over agricultural fields without depending on unified cloud options. Gadget identification and intercommunication is verified by a bitcoin blockchain that holds the special identity of each partaking node in the system.
- Founder of Ethereum blockchain Joseph Lubin terms it a "heavy duty" move by the technology giant to step into blockchain.
- Google has invested in blockchain startups including Sorj Labs, Blockchain, Ripple, LedgerX, Buttercoin and Veem.
- Google's, recent joint venture with Digital Asset aims to get DLT tools to its cloud service clients.
- In a push to help WhatsApp clients exchange cash, Facebook is apparently making a virtual currency. Anonymous sources revealed to Bloomberg that the organization is grinding away on a stablecoin, which is a cryptographic money fixing to the estimation of the U.S. dollar, and is apparently looking at India's remittance market. WhatsApp has more than 200 million clients in India – and, as per the World Bank, purchasers sent $69 billion to the nation in the previous year. All WhatsApp messages are organized chronologically. Data in the Blockchain is also stored chronologically. There is no way one can alter or modify the sequence of messages in a group. Not even the group admin.
- In comparison to standard CPUs and GPUs hosed in laptops and PCs, mining hardware tends to be awfully expensive. It also has a much shorter lifespan – sometimes due to the intensity of the mining process, and other times due to changes in blockchain software (known as "forks") that make the hardware less efficient.
- India is the largest recipient of remittances in the world ($80bn in 2018) and FB-owned WhatsApp already introduced peer-to-peer payments in the country some time ago.
- Introducing Kaleido to AWS clients is going to enable clients to move quicker and not stress over overseeing blockchain themselves.
- Local Bitcoins is a distributed trade administration. It just gives you a chance to discover bitcoin purchasers and dealers in your neighborhood and make the exchange that suits you both.
- Mastercoin is probably the most curious platform to disappear from our zeitgeist. It was a layer built on top of Bitcoin (leveraging its timestamps) that businesses could use to launch their own tokens.
- Minephone WX phone, what Wings Mobile claims is the "world's first smartphone that generates Ethereum.
- More than 20 billion IoT gadgets are anticipated to exist by 2020. From your smart cooler to a plane motor, these "smart" chips are now unavoidable.
- One of the most encouraging regions where blockchain can give critical business esteem is global supply chain network. In its present state, world exchange is directed through a disordered, divided arrangement of business connections among gatherings that are untrusted.
- Organizations, for example, Nasdaq and Chain of Things, a research organization that conducts studies on elective applications for blockchain and IoT, are investigating this field.
- Peercoin, the Proof-of-Stake cryptocurrency was in the fifth spot. It was once described by the New York Times as Bitcoin's rival, primarily because it had been accepted at a Star Trek convention, and was supposedly "more green
- Sample companies solving individual identity today: uPort, BlockAuth, Civic, Peer Mountain, IDRamp, Sovereign, Sovrin, LifeID, TrustedKey, Ping Identity, SelfKey, TheKey, NuID, ValidatedID, 2way.io, Microsoft, CryptID, ExistenceID, IBM, Blockstack, BlockCerts, Lumeno.us, etc. and other companies solving physical & virtual asset identity today: WAX, Verses,

BlockV, Xage, Guardtime, Filament, Chronicled, Blocksafe, DMarket, etc.

- Significant improvements in the world's standard of living will be attributable to the development of blockchain technology. Financial inclusiveness is the most obvious benefit of cryptocurrencies like Bitcoin. As is already evident today, Bitcoin and blockchain enable the unbanked population to get banked, and therefore, get paid.
- The Alphabet Inc. unit is developing its own distributed digital ledger that third parties can use to post and verify transactions. Google cloud platform offers various products in computing, storage, networking and other tools.
- The Bank of England reported as of late that it is hoping to inhale new life into their Real-Time Gross Settlement (RTGS) framework, utilizing both blockchain and DLT.
- The cloud computing goliath will group with another start-up propelling Tuesday called Kaleido, which was resulting from driving blockchain hatchery called Consensys.
- Tilepay offers a protected, decentralized online commercial center where clients can enlist their gadgets on the blockchain and sell their information progressively in return for advanced cash.
- Virtual resources will likewise have a one of a kind character on a blockchain. One case of virtual resources would be crypto kitties, anecdotal cats existing in a virtual diversion and living on the Ethereum blockchain.
- VirWox entered as virtual exchange for digital currencies used in video games.
- Volkswagen recently marked its joint effort with IOTA as an examination in DLT.
- xCoins is a combination peer-to-peer lending platform and bitcoin exchange. Instead of buying or selling bitcoin, users offer loans to each other and set an "interest rate". These "loans" are repaid in one payment, making it functionally almost exactly like buying or selling bitcoin. Sellers "lend" bitcoin, and buyers take this "bitcoin loan" to repay in a single payment later on. This means it functions a lot like a bitcoin exchange, but can do things a typical exchange can't, such as accept PayPal or credit card payments.

9. Conclusion

Technology shift swiftly! If you are at a pine away paved in your gamble editing source codes or just you're approximately positively living in the example where there are only a few employers. Things have changed at the present. You need to take a footstep in advance and saunter with the ground-breaking technologies where Blockchain is one among the cream of the produce. Today, Blockchain and Machine Learning (ML) technologies are gaining physically powerful impetus and thrust around the world. Blockchain, a disruptive technology, made its big splash with cryptocurrencies invention and trading. On the other hand, with predictive and descriptive algorithms, machine learning is making huge waves in harnessing existing data to identify patterns and gain insights.

The blockchain technology is truthfully a disrupter. Maybe you wouldn't need a bank to send money to your friend on the other side of the world. You wouldn't need an electoral collage to accumulate results in your countries or organization's voting implement. You wouldn't have to worry about your international database being hijacked by hackers. You wouldn't have to worry about putting trust in central authorities, like banks, governments, etc, for the basic things you need. And you in all probability would be able to do things online without being traced. The internet wasn't dissimilar. It interrupts a lot of sectors. It was touted as the "automagic" solution to a lot of things. But many years down the narrow road, it has brought the world a lot of bad things from cybercrimes to fake news and a lot more to come. Just like Artificial Intelligence could cause problems for us in the future, the blockchain could be used for unhealthy purposes if not properly implemented. The blockchain technology has urbanized further than its use due to its security, privacy, traceability and inherent data provenance. It will definitely endow with prospect to organizations in developing nations like India in future and will unquestionably bang their future competitiveness and market share in a positive way. Blockchain technology will possess a great budding to give power to developing nations. Surely, however, the future will be brighter with the blockchain technology.

In conclusion, blockchain innovation empowers a gigantic scale tokenization of significant value producing resources, only reachable to the rich at this moment. Consider purchasing The Hotel in Terminal – III Airport or a lavish bit of gold mining gear delivering a consistent, repeating pay stream for more than quite a long while. To buy such an advantage these days, one must have a credit of outsized aggregates of cash from a bank and go out on a limb on the buy. Blockchain empowers tokenization of extensive scale resources. This implies regardless of whether you are a cultivator in rustic part of India or other part of world, you can now turn out to be a partial proprietor of a revenue-generating asset.

Annexure-I

Block chain a peer-to-peer network: A holistic Study from research firm to corporate house

ORIGINALITY REPORT

10%
SIMILARITY INDEX

PRIMARY SOURCES

1	www.blockchain-expo.com Internet	203 words — 3%
2	www.coindesk.com Internet	94 words — 1%
3	www.communicindonesia.com Internet	58 words — 1%
4	computer.expressbpd.com Internet	49 words — 1%
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16	Nicola Fabiano. "Internet of Things and Blockchain: Legal Issues and Privacy. The Challenge for a Privacy Standard", 2017 IEEE International Conference on Internet of Things (iThings) and IEEE Green Computing and Communications (GreenCom) and IEEE Cyber, Physical and Social Computing (CPSCom) and IEEE Smart Data (SmartData), 2017 Crossref	6 words — < 1%

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10 Year Plus Journey about GJEIS: From 2009–2019

GJEIS which was formulated in the year 2009 is one of the peer review refreed journal which had been sustained from this tempest. We want to share a very out of the ordinary festivity: the first 10 years of GJEiS with your shore up we had accredited from you and from many other colleagues from all over the sphere, this sparkle would not have draw closer exclusive of the contributors support and backing. This volume is signpost in plentiful ways. First, it scripts the establishment of our 10th year of publication, in which we have foretaste how GJEiS had full-fledged from underside to apex. Second, we are about to go on board into our first new decade, under the banner of our new publisher, Scholastic Seed Inc. (www.scholasticseed.in) Scholastic Seed Inc. originated as a think-tank and an Out-of-Box service contributor of periodicals online platform apparatus and had urbanized digital state-of-art periodicals software exclusively for the magazines, scholarly journals, newspapers, annual reports and newsletters. In the present state of affairs these publications are available at usual intervals and required lots of digitization and contemporary thought to burgeon online..

I would like in person thank KARAM Society for having the vision to back our young periodical and see it through to adolescence. I've been providential to plug away with some splendid population, who helped an inexperienced editor, as we urbanized a bulletin with a very divergent gaze and undergo to most others in the geography. As we go into the next segment of our escalation, I'm looking forward to working with Scholastic Seed Inc. originated a E-publishing Aggregator & Periodical Mentor & Informatics Ltd. http://www.informaticsjournals.com/index.php/gjeis, a pioneer in library management and innovative corporation, which is rapidly expanding in the area of periodical. The vertebrae of any journal is its editorial board as which not only endorse the journal but reinforce in making more strapping editorial boards in many ways. Perhaps the most widespread gathering of the board is to endow with high-quality reviews for articles where you may be besieged to find tangential reviewers. Board members can also perform as a third, or trusted "tie-breaker" reviewer on articles where you have received split opinions from the other referees. We had fashioned a new pedagogy from 2019 to reinforce and bring lucidity. The below box mentioned give the clear understanding of a review process the journal follow across all the article published in particular issue volume after volume, the extract of the reviewer's and editorial comment is enclosed just for the knowledge to the reader how we exactly go through and tackle article. From forthcoming issue we had make our mind to add a blind reviewers comment at the end of an article without disclosing the identity, so that more curious debate in academia would reach to unreached which by and large facilitates a grass root researcher about the reviewer process.

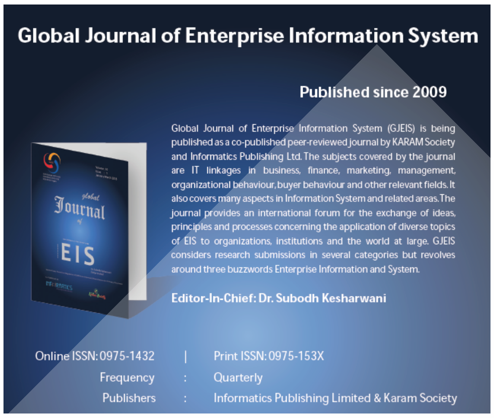
Paper Code (DOI-USA): $$$$$; Originality Test Ratio: $$%; Submission Online: DD-MM-YEAR; Manuscript Acknowledged: : DD-MM-YEAR; Originality Check (ithenticate): : DD-MM-YEAR; Peer Reviewers Comment: : DD-MM-YEAR; Double Blind Reviewers Remark: : DD-MM-YEAR; Author Revert: : DD-MM-YEAR; Camera-Ready-Copy: : DD-MM-YEAR; Editorial Board Citation: : DD-MM-YEAR; Published Online First: : DD-MM-YEAR

Editorial Comment Column: This particular column can furnish an elaborative view on the paper the day it had been submitted and DOI generated at that juncture (sample) to give full transparency. If the paper published in due course the same DOI converted into a 5 digit code and mentioned at the right side of cover page and in a Paper code head too, otherwise will scrap the code in order to avoid misconduct. The purpose behind to give a full clearness to the authors. For more detail about the DOI one can visit https://www.doi.org. Editorial board are in suitable passageway answerable for the supremacy of the critique and cautious for recognize noteworthy 'worth mentioning topics', sourcing high quality manuscripts, handling schedule paperwork, and organizing the flow of manuscripts *(i.e. from author to referees and back in a camera ready shape).*

The editorial board (sometimes known as an advisory board) typically consists of a group of prominent people in the journal's field. Having an editorial board is very significant: they act as ambassadors for journals. To some extent the quality of a journal is judged by the members and scholastic credentials of its editorial board. Aside from providing prestige, the role of the editorial board is to advise and support the editor. Functions may include:

- *Identifying new topics for commissions, special editions and advising on direction for the journal- giving feedback on past issues and making suggestions for both subject matter and potential authors*
- *Provide content by writing occasional editorials and other short articles*
- *Approaching potential contributors*
- *Peer review; also help to identify peer reviewers and provide second opinions on papers (i.e. where there is a conflict between reviewers)*
- *Identify appropriate conferences for editors to attend*
- *Endorse the journal to authors, readers and subscribers and encourage colleagues to submit their best work.*

In inspection of the precision that it has started its publication has contemplate on issues concerning science, management, engineering and technology in various leading circumference areas of research, development and its connotation. Since GJEIS which addressed as an academic journals are not sustain economically by institution but supported by KARAM Society a Research and Academic Management conglomerate and professional organizations, who in the backdrop plot a route.



The GJEIS as a scholastic journal facilitates debonair with its research initiatives and meticulous blind and peer review process the journal is currently at present listed in almost fifty directories in the globe, equipped with Digital Object Identifier (DOI) from Cross-ref USA http://www.crossref.org. It also had an average impact factor of 2.31 from the various impact factors rating agencies. Recently as per the Google scholar it h-index is 94 and i-10 index is 921 from 2009-2018. From 2019 onwards as per the instruction given by the international listing agencies which provide ratings to the journal, we had started putting a similarity index at the end of an article to give more transparency and creditability

Hope that this kind of initiatives can definitely give journal an edge and create a niche. The journal with its present Volume-10 Issue-II Apr-June 2019 had a mandate to popularize the thought of Enterprise, Information and System in business and remote business. It is designed to make graspable to community that harmonization of three words is not just a economic idea, but is more omnipresent, that is why we have to get transversely what the academics and the peers are doing and saying about scientific showground in creating a recess. We have fabricated an across-the-board cluster to make GJEIS genuineness.

We had moreover at the present made the Subscription based access. On the other hand the dedicated page in Face book created in order to fiddle with the GJEIS alliance https://www.facebook.com/GJEiS. The GJEIS website has been moving to a new contemporary Google-hosted JavaScript service which label the length of population curate online directory, helps in indexing and smooth the development of in providing access to peer-reviewed articles. It is also equipped with search engine optimization and web analytics for statistical analysis and citation. GJEIS is also been placed at UGC Approved List of Journals at S. No. 27981 https://www.ugc.ac.in/journallist

To commemorate this anniversary we want to publish a Special Issue that collects your impressions in the form of review, original article, letter to the editor, opinion or perspective article, etc., which include a paragraph with congratulation to *GJEiS*'s 10th Anniversary or a personal reflection on *what has GJEiS influenced in my work as a researcher? Why do I like to publish in GJEiS? Or what do I think GJEiS has contributed to the field?* I on behalf of GJEiS grab this opening to eloquent indulgence to the complete personnel of KARAM Society and community from Informatics for their enthusiasm and relish in bringing out this fast-moving volume/issue. To make journal a benchmark from 2019 we are creating a new team with more contemporary thought and strengthening the peer review process. I would in tot up be affectionate of to authenticate confirmatory feedback to our society staff at the periodical office, for their well judged and meticulous effort.

Submony.

Dr. Subodh Kesharwani
Editor-in-Chief, GJEiS
Three Year Notified Tenure 2018-2020

Global Journal of Enterprise Information System

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Role of Emotional and Spiritual Intelligence for Retention: A Study of Higher Education System in India

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Abstract

Retention policies in higher education institutions in India are formulated on the basis of performance of faculty members of the institutions. Till date, academic credentials of faculty members are the basis of their recruitment and selection. But for retaining high performers in the institutions, intelligence beyond cognitive should be inculcated in performance measurement systems of the institutions. This study explores the impact of emotional and spiritual intelligence on performance of faculty members for retention using structural equation modeling. The study reveals that there is significant impact of emotional and spiritual intelligence on faculty performance. Therefore, these forms of intelligence must be included and implemented for performance assessment in higher education systems while framing retention policies.

Keywords: Emotional Intelligence, Higher Education, Performance, Retention, Spiritual Intelligence, Structural Equation Modeling

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Editorial Board Excerpt: Editorial board are eventually accountable for the quality of the article and conscientious for identifying significant 'noteworthy topics', sourcing high quality manuscripts, handling day-to-day paperwork, and organizing the flow of manuscripts (*i.e. from author to referees and back in a camera ready shape*). The two most worth mentioning attributes of any article suitable for GjEiS are (1) having a comprehensive acquaintance of the subject area and (2) being organized. Depending on the size of the article and its subject depth, the number of editors can range from one or two people to many more and sometimes to bring transparency the blind reviewer process enabled to provide complete justice to accepted article. Initially at the Time of Submission (ToS) submitted paper had a 28% plagiarism which is an accepted percentage for publication as some of the contents are the author's self acknowledge work and copyright free material. The editorial board is of an observation that paper had a successive close watch by the blind reviewer's which at a later stages had been rectified and amended by an authors (Shitika, Ruchika & Vij) in various phases as and when required to do so. The reviewer's had in a first round stages mention with minor revision with a following statement which at a short span restructured by an author. The comments related to this manuscript are tremendously noticeable related to Emotional and Spiritual Intelligence vis-à-vis Higher Education System in India both subject-wise and research wise by the reviewers during evaluation and further at blind review process too. All the comments had been shared at a variety of dates by the authors' in due course of occasion and same had been integrated by the author in computation. By and large all the editorial and reviewer's comments had been built-in in a paper at the end and further the manuscript had been earmarked and decided under "**Empirical Research Paper**" category as its highlights and accentuate the work in relation to Higher Education System in India which is an empirical study.

1. Introduction

Teaching faculty members are essential human resource of Institutions and Universities in higher education. They accelerate learning in form of knowledge and wisdom. The main task of faculty members in higher education can be distributed into three categories, namely, teaching, research and management. The higher educational institutions evaluate the cognitive intelligence while recruiting and selecting faculty members. This is evidenced through their academic credentials and interviewing their domain knowledge. Quality teachers are the assets of the institutions who can contribute in enhancing their intellectual capital. In order to enhance the quality of education, institutes of higher education need to create, employ, develop and retain the best talent. It starts with the process of recruitment, development and then comes the process of retention. And it is not only retention, but the critical question is the retention of high performers. High performers are those who can add value to the intellectual

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capital of Higher Education Institutions (HEIs).Therefore, it becomes imperative to identify the parameters which can contribute in recruitment and retention of star employees.

Till now, evaluation of faculty performance plays a vital role in educational institutions. The measures and criteria to determine faculty performance are based on quantitative aspects. The parameters included in appraisal of faculty are teaching, learning and evaluation activities; co-curricular and extension activities; and research contribution. While recruiting, these aspects along with the domain knowledge are taken into consideration. Every HEI set proficiency benchmarks to assess the performance of teaching faculty. Organizational members begin to make high stake decisions about faculty performance levels relative to those benchmarks as defined by the institutions. Faculty members believe that the process of linking reward/awards and recognition is still unsatisfactory (Badri & Abdulla, 2004). Merit pay system is deeply engraved in the system. In order to improve the quality of HEIs, it is important to uncover parameters along with cognitive intelligence, which help in retention of high performers. When a faculty member is recruited, it is taken well into consideration that the faculty member fulfills the minimum eligibility criteria as prescribed by regulatory authorities. This can be guaranteed by examining their academic credentials. Once their academic credentials are verified, their domain knowledge is tested which may demonstrate their teaching skills (Neogi, Mondal & Mandal, 2008). Individuals in higher educational institutions are selected on the basis of academic aptitude or performance (Wise, 1975).

Also, it has also been established by Goleman (1995) that a new form of intelligence pertaining to emotions is related to the performance of organizational members. The differentiating factor in the process of recruitment is not solely their academic credentials but also factors other their intelligence quotient which play important role in determining faculty performance. Intelligence quotient contributes in measuring the cognitive skills of faculty members. It is equally important to consider the behavioral aspects of employee performance. These behavioral aspects can be measured by evaluating faculty performance on the basis of other forms of intelligence particularly, behavioral.

The aim of this paper is to assess the impact of emotional and spiritual intelligence on faculty performance for retention. Since a lot of literature concerning cognitive intelligence and job performance is available. The relationship of other types of intelligence with job performance in higher education institutions is identified as a research gap and taken as a research study. Despite the popular interest, there is paucity of studies on how emotional and spiritual intelligence are related to job performance in academic sector in India. This research study will address the issue of performance of teaching faculty members and their retention in HEIs.

2. Research Objective

Since intelligence is a theoretical construct, the researchers have defined its dimensions based on the setting used to explore the construct. The objective of this research study is to examine the impact of emotional and spiritual intelligence on performance of faculty members in private higher educational institutes for retention. To test the proposed model (Figure 1), the following objectives were formulated:

1. To measure the impact of Emotional Intelligence on Faculty Performance,
2. To measure the impact of Spiritual Intelligence on Faculty Performance, and
3. To assess the impact of faculty performance on their retention.

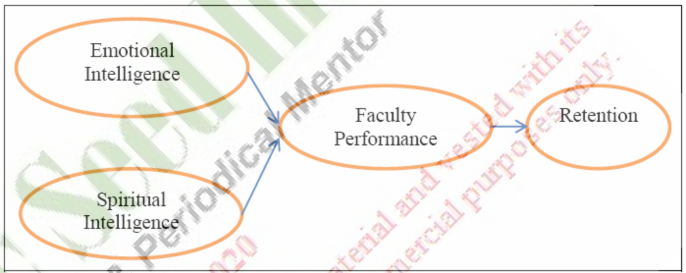


Figure 1. Proposed model of study.

3. A Brief Review of Literature

In order to explore the concept of emotional and spiritual intelligence, it was necessary to first identify the relationship between faculty performance and cognitive intelligence of individuals. This has been done by identifying the literature concerning this domain. Research papers were examined from different sectors to identify the relationship between cognitive intelligence and performance. A few studies have been cited below:

A study was conducted to determine the relationship between emotional, cognitive intelligence and job performance. The researchers of the paper concluded that there is association between cognitive and emotional intelligence and task performance. The same impact was found on organizational citizenship behavior (Cote & Miners, 2015). A meta-analysis was done related to performance of employees and emotional intelligence. They have measured emotional intelligence on three streams approach. The three streams correlated differently with cognitive capabilities. Dominance analysis was done which demonstrates that all three streams of emotional intelligence exhibit substantial relative importance in presence of other intelligence when demonstrating job performance (Jr, Humphrey, Pollack, Hawver

& Story, 2011). Another paper examines how HEIs might operationalize faculty performance in terms of research and teaching. An AHP model was developed to allow decision makers to couple performance evaluation and academic recognition (Badri & Abdulla, 2004). Yet another research focuses on predicting the quality, productivity and potential of faculty across various disciplines. The data mining methodology used was able to identify unidentified trends in performance when measured on several parameters (Singh & Gopal, 2010). A study on talent acquisition and retention issues of faculty in higher education revealed that private institutions can increase their faculty retention by communicating institution's mission and values to the staff. The study also revealed that HEIs with optimal retention have documented their salary scale well so that it has an easy access (Shikha, 2012). Identifying areas of successful contribution to institutional goals, process of appraising staff performance becomes much easier. It was concluded in a study that more attention should be paid to self and peer appraisal in higher education (Gold, 1993). Another research studies realized the fact of increasing supply of management and engineering institution is increasing and it created an imbalance in demand and supply of talented faculty. Due to this heavy faculty turnover was seen. The study concluded that low priority has been assigned to research and therefore, teaching faculty does not consider research as one of the performance measure (Mittal & Singh, 2017). One more paper examines enterprise bargaining agreements of universities to explore the status of performance management. This study explored that individual academic performance has been linked to organizational goals. However the role of performance management as development or monitoring tool is still not clear. It is because performance appraisals are being used to reward faculty in traditional areas that were considered as standard working rights and conditions (Morris, Stanton & Young, 2007). Boyer (1990) argues that the full range of faculty talent must be more creatively assessed. It was mentioned that research and publication was the sole criterion identified for performance appraisal. This created disappointment in faculty because this system restrict faculty and distort institutional practice (Flaniken & Cintron, 2011).

4. Emotional Intelligence

A study was undertaken to understand the performance levels of faculty in connection with the emotional intelligence. Significant aspects of emotional intelligence such as self-awareness, self-management, social awareness and relationship management were studied in relation to job performance. The study found a positive association between performance of the employees and emotional intelligence (Rebello, 2011). Another study focuses on understanding the relationship between emotional intelligence and problem solving skills of teachers. Bar-On Emotional Quotient Inventory was used to test the findings. It was found that emotional intelligence is significantly associated with problem solving skills (Deniz, 2013). Another attempt was made to examine the extent to which middle level managers with high emotional intelligence are capable of delivering positive work attitude and outcome. The result indicated that emotional intelligence has significant impact on work family conflict, job involvement and job performance (Sinha & Kumar, 2016). A landmark research on emotional intelligence titled 'Intelligence beyond IQ' suggested that traditional IQ which is a measure of cognitive intelligence explains only a small portion of leadership effectiveness. This work explored the role of emotional and spiritual intelligence in developing and predicting business leader effectiveness. The research work suggested that there is a correlation between EI, SI and Spirituality (Amram, 2005). A case research on the role of trait emotional intelligence and conceptual performance also confirmed the link between emotional intelligence and work outcomes. The results were derived for role in task and contextual performance within given organizational cultures (Edit, 2006). Another study developed an increased understanding of how emotional intelligence impacts on workplace engagement behavior. The research findings suggested that there is significant association between emotional intelligence and work engagement practices employed in the organizations (Ravichandran, Arasu & Arun Kumar, 2011). Executives are rewarded according to their ability to achieve results and to involve in strategic decision making. A research study in this context established the facts that emotional maturity enables people to use their mental patterns effectively to combat the changing practices of strategic decision making (Wallace & Rijamampianina, 2005). A correlational study on Emotional Intelligence and Job Satisfaction tries to analyze the impact of designation, experience and marital status of an employee on his/her emotional intelligence at workplace and job contentment. The study explored that there is very high positive relationship between emotional intelligence and job satisfaction along with a strong impact of experience and marital status (Ealias & George, 2012)

5. Spiritual Intelligence

A cross sectional study was conducted to examine the association between managers' spirituality and their leadership styles (Ghorbanian, Ghorbanian, Vatankhah, Bahadori & Ravangard, 2014). Another study mentions the spiritual intelligence status of staff and teaching members of Islamic Azad University. They concluded that there is no meaningful correlation between the spiritual intelligence and the age, service history and the marriage status. There is also meaningful difference in spiritual intelligence in terms of scientific rank. Gardner (1993) argued that intelligence should not be baffled with an individual's phenomenological experience, noting that for most; spirituality involves certain feelings of relatedness to a higher being. He does not view these feelings as "indicators of intelligence". Spiritual intelligence consists of a set of mental abilities distinct from any related feelings or visceral reactions. Gardner (1993) appears to readily equate spiritual intelligence with spirituality and religiosity. This is a considerable error, one that could be compared to equating music with musical intelligence or language with linguistic intelligence. Rather than attempting to transform such diverse domains into intelligence, one must extract those aspects which are indicative of a core set of mental abilities.

Emmons (2000) provided support for spiritual intelligence according to Gardener's criteria of five core abilities. Noble (2001) added two core abilities of conscious recognition and conscious pursuit of psychological wealth. He emphasized the value of high level of spiritual intelligence for one's psychological health. Zohar (2000) explained that spiritual intelligence represents brain's intuitive processes which serve to reconceptualise experience and produce meaning.

Wasel (2004) developed a 17 item spiritual intelligence scale incorporating traditional Christian values and new age spirituality (Bouckaert & Zsolnai, 2012).

Frey (2007) conducted a study on "Discerning life with dreams: The triadic relationship between dreams, discernment, and spiritual intelligence" at the California Institute of Integral Studies, USA. One of the main objectives of the study was to determine the relationship between dreams, discernment, and spiritual intelligence. It focused on the experience of people who use dreams to help them with spiritual discernment or decision-making in a spiritual context. Case study methodology was used for the study. Tools for data collection included questionnaires, personal dream records, and interviews to understand the selected seven participants' experiences of exploring their dreams for guidance. Participants were volunteers who responded by a newspaper advertisement requesting for people to come forward, whose dreams had helped them to make a decision, who journeyed their dreams, and who considered themselves to be spiritual.

Amran (2007) described seven themes of spiritual intelligence-meaning, consciousness, grace, transcendence, truth, peaceful surrender to self and inner directed freedom. Spirituality is the personal quest for understanding answers to ultimate questions about life, meaning and relationship to the sacred or transcendent.

King and Cicco (2009) conducted a study on 'A viable model and self-report measure of Spiritual Intelligence' on University students. They identified that four components of spiritual intelligence mentioned in King's inventory pose a positive correlation of SI with age of the students.

Wersma et al. (2009) piloted other study on 'Theorizing the dark side of workplace spirituality'. Their research was based on extensive literature study on spirituality. They tried to relate critical workplace spirituality with organizational effectiveness. They mentioned that there is no significant association between workplace spirituality and organizational effectiveness.

Evren Ayaranci (2011) in his research work on 'Effect of Top Turkish managers' Emotional and Spiritual Intelligence on their Organizational Performance' proposed and tested a model that studied this impact. But they could not suggest strongly that spiritual intelligence impact performance since each factor of SI demonstrates very less correlation with performance of the organization.

Another research conducted by Syed et. al. (2014) on 'The role of spiritual intelligence on organizational commitment' suggested that there is a strong correlation between Spiritual Intelligence and commitment of employees in organization.

Abdul and Mustamil (2014) also explored a research on 'Communities of Practice Workplace Spirituality and Knowledge Sharing'. They recognized that Spiritual behaviour leads to boosted corporate performance. They also suggested that spirituality in organizations if encouraged by top management can contribute in workplace effectiveness.

6. Faculty Performance

Kahn (1992) found that jobs which are high on the core job characteristics provide individuals with the space and impetus to bring more of themselves into their work.

Ones and Schmidt (1996) defined performance as collection of observable and unobservable behaviours which can be appraised at workplace. Vishwesvaran (1993) had given 10 different dimensions of performance based on the nature of the job. Individual performance can be defined as actions and behaviours individuals carry out which are linked to company goals (Campbell et al., 1993).

In order to quantify performance, one needs to establish performance criteria which will be used in the assessment of the work outputs. The performance benchmarks need to be developed by adopting a holistic approach – that is, when measuring performance one needs to look at the whole system. For example, an employee's work output is influence by the context and his or her interdependence on other systems (Lewis et al., 1998).

Rothmann and Coetzer (2003) highlighted that it is a multidimensional concept which briefs how one completes an assigned task with efficiency with effective use of skills possessed. Cascio and Aguinis (2005) propounded that job performance is evaluated in terms of the criteria. Criteria are the standards used to measure a person's success on the job.

Employees play a gigantic role in organisational performance, because without them there is no organisation (Hayward, 2005).

A study conducted by Nalini et al. (2016) enhances an understanding of connection between pay variable system and employee satisfaction level which further determines job performance of employees. When employees are more engaged in their work, they will find their work to be interesting rather than challenging and will be more committed, robust and absorbed in their jobs (Crawford, LePine & Rich, 2010). This will lead employees to think in a positive manner and will help them in serving their stakeholders well (Harter et al., 2002). In a study by Sonnentag (2003), it was found that engagement influences in-role behaviour, proactive behaviour and also organizational citizenship behaviour. This shows that employees who are engaged will have a broader perspective of their role and will reach out to broader set of activities in their jobs.

Employees are assessed and rewarded on the basis of their ability to achieve results. We have too much information and yet we lack perfect information and knowledge. Successful executives know when to depend on data and when to depend on collective intelligence of leaders at all the levels in the company. Emotional maturity helps people in organisation to use their mental patterns effectively when involved into strategic decision making (Rijamampianina, 2016).

7. Research Methodology

7.1 Sample

A two-step sampling process i.e. random sampling and non-probability judgmental sampling was used with a sample size of 531 respondents. Random sampling has been used for selection of colleges and Non Probability Judgmental Sampling for selection of faculty members from selected institutions. A list of various private management and engineering institutes in Delhi-NCR was obtained from AISHE report, 2016. 12 different cities around Delhi- NCR were selected. Subsequently, 75 management and 54 engineering institutions are selected from the list using random sampling. Finally, selection of faculty was done using non probability judgmental sampling.

7.2 Instrument

The study makes extensive use of primary data using questionnaire as a research instrument. Genos Emotional Intelligence Inventory has been used to measure emotionally intelligent behaviour demonstrated by individuals at workplace. The scale consists of 70 statements related to different constructs of emotional intelligence (Gilles E. Gignac, 2010). Spiritual Intelligence Self Report Inventory developed by King (2008) has been used to measure demonstration of spiritually intelligent behavior by individuals at workplace. A questionnaire has been developed to measure faculty performance using models such as Performance Based Assessment system of National Board of Accreditation, and National Institute Ranking Framework to measure faculty performance. Parameters concerning different dimensions of faculty performance are identified. The scores obtained for performance indicators are used for teacher's self-assessment. Retention is measured by identifying the factors affecting retention. A pilot study has been conducted to verify the predictability of 32 factors related to retention. The factors showing commonalities less than 0.4 have been excluded and remaining factors have been used in the final questionnaire.

The instrument also contained a section collecting data on gender, age and educational qualification of respondents.

8. Analysis and Discussion

Initially, we analyzed the combined effect of emotional intelligence, spiritual intelligence on faculty performance using logistic regression. It has been found that the value of R square improves to 57% which implies that it is imperative to include other forms of intelligence to study their impact on faculty performance. Therefore, after confirming that the performance has association with emotional and spiritual intelligence, the next step was to analyze the impact of emotional and spiritual intelligence on faculty performance.

The analysis of reliability of the instrument is followed by the assessment of scale component factor structure.

Reliability statistic Cronbach's Alpha has been calculated to assess the consistency of results to be derived. The suggested acceptable value is 0.5 or above for the data to be reliable.

The results for reliability are shown in Table 1.

Table 1. Reliability of variables

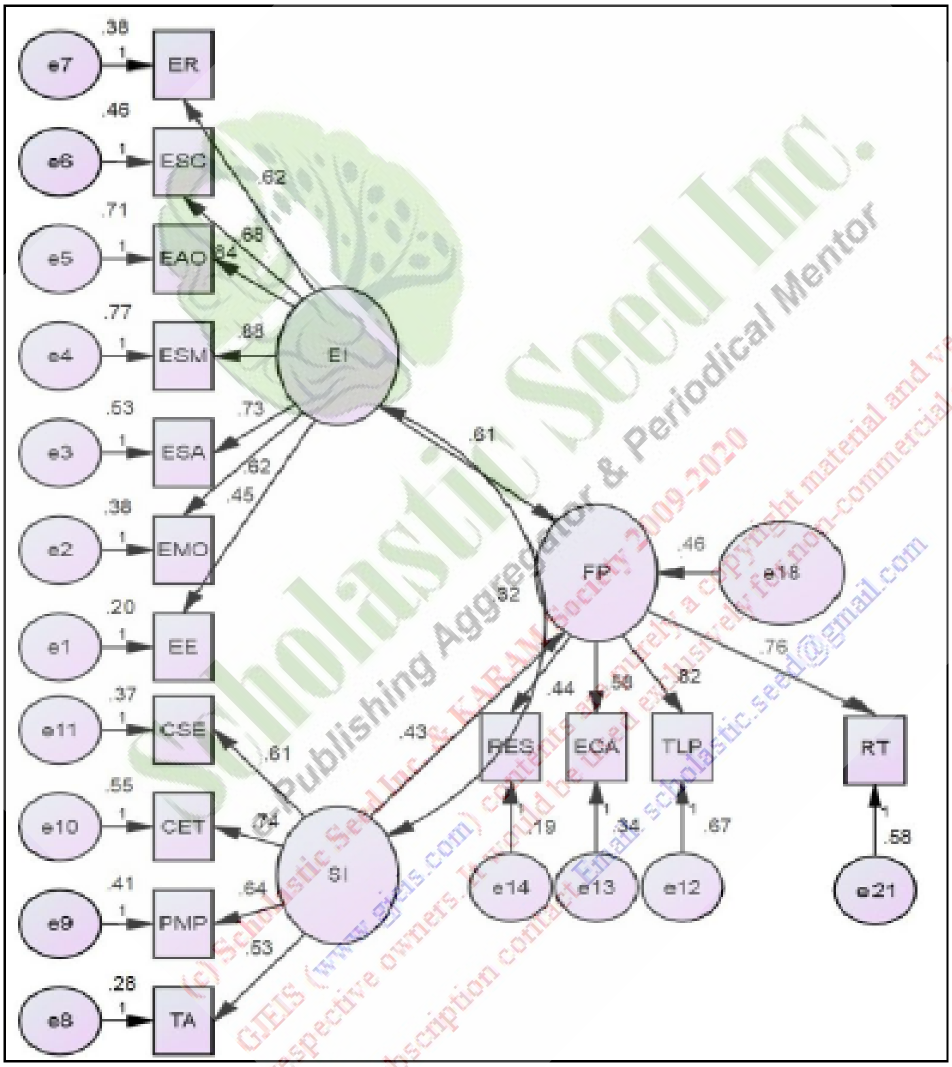
Construct	Cronbach's Alpha
Emotional Intelligence	0.851
Spiritual Intelligence	0.829
Faculty Performance	0.715
Retention	0.842

The reliability test indicates that all the scales used in the questionnaire are reliable and therefore further analysis can be performed. Factor analysis was performed subsequently.

Initially 21 factors were identified constituting 70 statements for emotional intelligence. But when the sample size was increased to 531 respondents, the number of factors was reduced to seven. These factors are self-awareness, awareness of others, self-management, management of others' emotions, emotional expression, emotional reasoning, and emotional self-control. The inventory of spiritual intelligence constitutes 24 statements. Four components (or factors) have been identified on the basis of factor analysis: conscious state expansion, personal meaning production, critical existential thinking and transcendental awareness. Three factors were identified for

Table 2. Fit indices for proposed model

Fit Statistic	Obtained	Recommended	Result
CMIN	5.704	Should be close to 5 (Byrne 2006)	Good fit
CFI	0.401	Should be close to 1 (Byrne 2006)	Mediocre fit
RMSEA	0.09	Lower value indicates better fit(Byrne 2006)	Mediocre Fit
Chi Square	667.413	Lower value indicates better fit (Byrne 2006)	Mediocre fit
GFI	0.88	>0.90 (Byrne 2006)	Good fit
RMR	0.019	<0.02 (Byrne 2006)	Good fit



(ESM = Emotional Self-management; ESA = Emotional Self Awareness, EE = Emotional Expression; EAO = Emotional Awareness of Others; ESC = Emotional Self Control; EMO = Emotional Management of Others; ER = Emotional Reasoning; CSE = Conscious State Expansion; TA = Transcendental Awareness; PMP = Personal Meaning Production; CET = Critical Existential Thinking; TLE = Teaching and Learning Activities; CCA = Co-Curricular Activities; RC = Research Contribution; EI = Emotional Intelligence; SI = Spiritual Intelligence; FP = Faculty Performance; RT = Retention)

Figure 2. Structural model showing structural relationship for proposed model.

faculty performance. These factors were named as in performance based assessment system as Teaching and Learning Practices, Co-curricular Activities Involvement and Research Contribution. Six factors were identified in retention. These factors have been divided into two categories. First set of factors are the factors which are static in nature but whose absence may lead to dissatisfaction in employees. Second category of factors, on the other hand, motivates employees to stay in the organization. These are the factors which motivate employees for superior performance.

Once factor matrix has been developed, the next step is to choose an appropriate test to understand the nature of relationships between dependent and independent variables. Since there are multiple dependent and independent variables, structural equation modeling was found appropriate for this analysis. Dependent variables considered are faculty performance and retention, while independent variables are emotional and spiritual intelligence. Hypotheses have been tested at a significance level of 0.05. SEM seeks to explain the relationships among multiple variables. It helps in estimating a series of separate but interdependent and multiple regression equations. Measurement and structural models have been developed. The following test statistics have been obtained (Table 2).

The value of chi-square is 667.413. The higher the value of chi-square, the worse the model corresponds with the data. Therefore in this case, it appears to be a good fit. The goodness of fit index measures the proportion of explained variance. The GFI value of 0.88 represents a good fit. Another test statistic RMSEA also indicates mediocre fit. It attempts to correct for the tendency of chi-square test statistic to reject models with large samples (Figure 2). The regression equations for predicting dependent variables can be written as follows:

1. EI = 0.88ESM + 0.73ESA + 0.45EE + 0.84EAO + 0.68ESC + 0.68EMO + 0.62ER,
2. SI = 0.61CSE + 0.53TA + 0.64PMP + 0.74CET,
3. FP = 0.82TLE + 0.58CCA + 0.44RC, and
4. FP = 0.61EI + 0.43SI.

9. Discussion

On the basis of the analysis performed, it can be concluded that present practices of recruitment and selection of faculty members based on their academic credentials should continue. However, the combined impact of emotional and spiritual intelligence has been observed to be significant on faculty performance. Therefore, multiple intelligence (i.e. academic achievements plus EI and SI scores) can better predict the performance of faculty and can help in devising more effective policies related to retention. Retention of high performers in the institute positively impacts the institutional performance. Hence, promoters and leaders of these institutions should formulate effective policies for retention of high performers. It has also been observed that most of the faculty members choose to stay (for a substantial years) in an institution because of positive work environment and opportunity for self-development. In other words, factors which motivate employees for superior performance have a stronger appeal to the faculty members for their long term commitment and engagement to the institution. Academic leaders should underline this point while formulating their HR policies for their teaching faculty members. Retention is not the sole aim of private higher educational institutions, but they require high performance in terms of faculty contribution to the institution. Performers who score high on emotional and spiritual domain can better contribute to the institutions, not only by imparting knowledge but also by inculcating moral values and optimistic personality traits in their students. Since high performers stay in the organization primarily due to factors like career development and growth policies, academic leadership in the academic institutions should focus more on individual merit instead of cadre ratios and hierarchies while providing opportunities for prestigious research assignments, faculty development programs and inter-institution collaborative projects. Such policies will encourage the faculty to contribute their best and also engage them to stay longer with their institutions.

10. Conclusion

Present study provides a new insight and basis for formulating policies for selection, appraisal and retention of faculty having potential to contribute and become good performers. The study concludes that cognitive intelligence of the faculty reflected in their academic achievements is essential, but emotional and spiritual intelligence of the faculty also significantly affects their performance. The universities and institutes can devise policies concerning recruitment, career advancement and retention of the faculty members based on their academic track record as well as emotionally and spiritually intelligent behavior at the work place. Those academic leaders of the universities and colleges can motivate their teams/departments and can create positive environment leading to higher engagement and retention of good performers. Hence, this research study has implications for all the stakeholders of universities and institutes.

11. Scope for future research

This study focuses primarily on two forms of intelligence besides cognitive i.e. emotional and spiritual intelligence. However, other forms of intelligence can also be considered in proposed model of the study. Further, the present study considers cities around Delhi NCR as sample to analyze the impact. In future this area can be extended or a comparative analysis can be done to analyze the overall effect.

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Annexure-I

Role of Emotional and Spiritual intelligence for Retention: A study of Higher Education System in India

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Estimating the Sacrifice Ratio for Indian Economy: An Empirical Study

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Abstract

This paper investigates the cost of reducing inflation that an economy pays in from of reduction in output. Sacrifice ratios is estimated for India using aggregate supply curve approach and direct method. The study uses quarterly data from Q2–1996 to Q2–2016 in India. Auto-Regressive Distributed Lag (ARDL) model is used for aggregate supply curve approach. However, the time varying sacrifice ratio is estimated for year 2006 to year 2015. Sacrifice ratio is estimated to be 1.30 percent for whole period whereas in period 2006 to 2015 it is ranging from –0.71 to 1.20. Whereas, in case of Ball's direct method four episodes are identified and average sacrifice ratio of all four periods are estimated to be 1.23 and it is varying in the range of –1.56 to 4.55. During RBI's expansionary policies sacrifice ratio is estimated to be higher than contractionary policies.

Keywords: Aggregate Supply Curve, Auto-Regressive Distributed Lag (ARDL), Inflation, Philips Curve, Sacrifice Ratio, Vector Auto-Regressive (VAR)

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1. Introduction

Any nation that wishes to bring down inflation rate may endure output losses in the interim period. Sacrifice ratio shows the trade-off between output and inflation. It is the cost of combating inflation, the loss of output that must be shouldered by economy with a specific end goal to accomplish a lessening in inflation. Sacrifice ratio had turned out to be vital since great depression because it crystallizes the measurement of the cost of deliberate inflation. Economists have paid a lot of attention to estimate sacrifice ratio because this ratio plays an important consideration while setting monetary policy. Generally, the monetary policy authority of a nation uses contractionary monetary policy to maintain price stability. However, such strategy accomplishes its objective of decrease in inflation with a related cost in loss of output. The low inflation is accepted to favorably affect the economy which may have the capacity to counterbalance the loss of output. In case of aggregate supply curve approach, for a given potential output, reduction in inflation

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is occurred either due to expected inflation or due to decrease in actual output. In short run, reduction in inflation is caused by economic modernization because it takes time to change expectations for wage setters. Whereas in long run monetary policy expansion and contraction controls the movement in inflation using expected inflation as major attribute. This paper focuses on measuring India's sacrifice ratio. We analyzed quarterly data for year 1996 to year 2016 and used ARDL model to identify relation between inflation and output by taking into consideration policies of central bank and other major external factors. For year 2006 to 2015 time varying sacrifice ratio is estimated. To test the robustness of model modified Philip curve is estimated and relation between inflation and output gap is compared. Using Ball's "Direct Method" sacrifice ratio is estimated during different disinflationary period. We had used same time period in both techniques so that estimates could be compared.

The study proceeds as follow: section 2 presents literature survey, in section 3 there has been detailed description of methodology, concepts used and sources of data used in the study, section 4 includes results and discussion and section 5 concludes the article.

2. Literature Review

Using aggregate supply curve approach sacrifice ratio was estimated by Okun (1978); Gordon and King (1982). Later on Laurence Ball (1994) suggested a different methodology to estimate sacrifice ratio which involves ratio of change in output to change in inflation during different disinflationary period. Taking after the contribution of Laurence Ball (1994); Okun (1978), several attempts were made regarding the matter of sacrifice ratio in developed countries. But, for large and developing nations such as India there are only a few genuine investigation has been done on the topic of sacrifice ratio. This is astonishing on the grounds that in spite of worldwide situation, India has been one of only a handful couple of nations battling the fight against inflation.

In general, it has been found that estimated sacrifice ratios varies across countries and time. Okun (1978) had found that 1 percent decrease in inflation is equivalent to 10 percent reduction in GNP of US economy. Gordon and Kings (1982) who refined Okun's approach concocted a gauge of sacrifice ratio that range from 0 to 8. Ball (1994) comes up with the direct method to estimate sacrifice ratio for US economy by taking into consideration disinflationary period. This is just a case of wide variety of the evaluations of sacrifice ratio over the technique, nation and time. To the extent sacrifice ratio for India is concerned, the evaluations likewise differ considerably over the techniques. Reserve Bank of India (RBI) (2002) in its 'report of currency and finance' estimated sacrifice ratio of 2 percent whereas Kapur and Patra (2003) estimates was varying in range of 0.5 and 4.7. Then, Mitra and Biswas (2015) estimated sacrifice ratio with time varying perspective using aggregate supply curve method.

When an economy experiences higher inflation, policymakers constantly attempt to convey it down to some desirable level. Sacrifice ratio is a cost of reducing inflation, the output loss to achieve a reduction in inflation. Since early 1980s, numbers of paper have attempted to estimate sacrifice ratio using different methodology.

The concept of sacrifice ratio was first introduced by Okun (1978) using Philip curve model for USA. He quantifies the trade-off between inflation and output within a range of 6–18 percentage point with an average of 10 percentage point. In other words, a one percentage point diminution in inflation rate would be associated with 10 percentage point reduction in GDP.

Gordon and King (1982) criticized the methodology of Okun and deliver a more precise estimation of sacrifice ratio using structural vector auto-regression model. They had estimated sacrifice ratio for US economy and their estimation of sacrifice ratio was in a range of 0 to 8 percentage point with an average of 3 percentage point which is roughly half the size of sacrifice ratio estimated by Okun.

Ball (1994) had pointed out the discrepancy in Philip curve approach. He criticized them for compelling the trade-off between output and inflation to be identical throughout disinflation and also during temporary demand fluctuations. Ball estimated sacrifice ratio for 19 industrial countries by proposing a methodology based on an episode specific identification of disinflationary period by locating 'Peak' and 'troughs' in the inflation trend. He then estimated cumulative output loss over each predefined episodes. His estimation of sacrifice ratio was 0–3.5 percentage point with an average of 1.4 percentage point which was much lower than the previous estimation by Gordon and King.

Filardo (1998) estimated sacrifice ratio for USA using non - linear Philip curve which were sensitive to the initial strength of an economy. He has shown that non - linear Philip curve are of 2 types that is concave Philip curve and convex Philip curve. Concave Philip curve is consistent with an economy where firm are not competitive and they have some pricing power. Convex Philip curve is consistent with an economy subject to capacity constraint. He found that sacrifice ratio fluctuates crosswise over three regimes corresponding to period of strong, moderate and weak output growth. His estimation of sacrifice ratio was 2.1 in strong growth regime and 5.0 in weak growth regime.

Turner and Seghezza (1999) estimated sacrifice ratio for 21 OCED countries using aggregate supply curve model. His estimation of sacrifice ratio was lying in range of 2–4 for eleven OCED countries. It was low around 1.6 for Japan, Italy and Netherland and very high for Norway that is around 7. He found that sixteen out of twenty-one OCED countries have long run impact of output on inflation.

Andersen and Wascher (1999) employed three methodologies of estimating sacrifice ratio i.e. aggregate supply curve, structural wage and price equations also actual development in output and inflation. He had estimated sacrifice ratio for 19 OCED countries for period 1965–98. He found that sacrifice ratio raised from 1.5 during 1965–85 to 2.5 during 1985–98. This demonstrates that inflation stagnation paradoxically cause from intensify credibility of monetary policy in conjunction with wage price rigidities. Therefore, a lower inflation has been followed by flattening of aggregate supply curve which leads to tightening of monetary policy this leads to strong effect on real output than in past, with price adjustment occurring over a long time span.

Cecchetti and Rich (2001) criticized methodology of Ball. They pointed out that Ball's approach had neglected the impact of supply shocks and other demand shocks during disinflationary period. They had estimated sacrifice ratio for USA using quarterly data for period 1959 to 1997, they employed a structural vector auto-regressive model using two, three and four variables. For simplest two variables model indicates that value of sacrifice ratio lies between –0.5 and +3.8, the four variables model indicates value of sacrifice ratio between –43 and +68 which shows degree of imprecision is high.

RBI (2002) reported sacrifice ratio 2.0 percentages in its currency and finance report of 2001–02. It was estimated using aggregate supply curve model for India period 1975–2000.

Kapur and Patra (2003) assessed sacrifice ratio for India (1971–2001) utilizing short-run aggregate supply curve with 10 unique specifications. They argued that the size of sacrifice ratio relies upon choice of price indicator, time period and specification of short-run aggregate supply curve. Their estimation of sacrifice ratio ranged between 0.3–4.70 percentages.

Mitra and Biswas (2015) estimated sacrifice ratio for India using aggregate supply curve method as well as episode specific method. They had estimated it with time varying perspective using state space model and Gibbs sampling. They consider the sacrifice ratio as qualitative concept instead of quantitative concept and obtained a sacrifice curve by plotting time varying parameter along time. They found that sacrifice ratio estimates was higher during monetary expansion i.e. 2.8 and at the time monetary contraction it was 2.3. The sacrifice curve was on peak in Q3: 2003–04 to Q1: 2004–05 periods.

3. Methodology, Concepts and Data Sources

Three methods have been employed to estimate the sacrifice ratio. One approach estimates sacrifice ratio using structural Vector Auto-Regressive (VAR) model (Gordan & King, 1982); sacrifice ratio obtained by using VAR model is sensitive to size of model and imprecision of the estimates of sacrifice ratios is observed to be increment with the entanglement of the model. Second method is to calculate sacrifice ratio as losses in output during a disinflationary episode. This method has preferred standpoint of not compelling sacrifice ratio to be consistent for all disinflationary periods. On other hand approach does not provide any control for supply shock and focus is only on inflation and output not take into consideration correlation at other point in business cycle. Third approach estimates sacrifice ratio using aggregate supply curve i.e., Philip curve. This approach additionally controls for supply shocks and data requirements are less escalated than VAR model and issue of sensitivity is likewise dodged.

There are two implications that must follow while measuring the sacrifice ratio. First, any reduction in inflation because of factors such as fiscal tightening or exogenous exchange rate will not be considered while estimating sacrifice ratio. Second, it involves periods where reduction in observed inflation is permanent and followed by similar movement in expected inflation.

Aggregate supply curve approach:

$$\pi_t = \pi^e + \beta(y_t - y_t^*) \tag{1}$$

Here, π_t is inflation at time t, π^e is expected inflation, y_t is output at time t, y_t^* is potential output and $y_t - y_t^*$ is output gap and β is slope coefficient.

Equation (1) can be written as:

$$\log(WPI)_t = \alpha \log(WPI)_{t-1} + \beta ouputgap_{t-1} + \mu_t$$

$$\log(WPI)_t = \alpha \log(WPI)_{t-1} + \beta ouputgap_{t-1} + \gamma(L)S_t + \mu_t \tag{2}$$

In second equation WPI is wholesale price Index, S_t is to control for major macro-economic factors[1]. Here, α shows the impact of expected inflation on current inflation and β is the impact of output gap. This equation is estimated by using ARDL framework.

ARDL is autoregressive distributed lag model which we use when we have lag value of dependent value as explanatory variable and model is mixture of I (0) and I (1) variables.

$$\log(WPI)_t - \log(WPI)_{t-1} = \beta ouputgap_{t-1} + \gamma(L)S_t + \mu_t \tag{3}$$

Third equation is modified form of Philip curve which is applied to test the robustness of model. This equation is estimated by using finite distributed lag model.

To estimate time invariant sacrifice ratio yearly dummy is used from 2006 to 2015. Dummy variable is interacted with Log WPI at time period t–1 and output gap at time period t–1. Only interactive dummies are taken into model to maintain degree of freedom in model.

Output gap = log (Actual Output) – log (Potential Output)

Potential output is estimated using HP filter with λ = 1600 for quarterly data.

[1] The independent variables have been discussed briefly in the following section

Sacrifice ratio is estimated as:

$$\text{Sacrifice ratio} = \frac{(1-\hat{\alpha})}{\hat{\beta}}$$

Here, α is coefficient of inflation and β is coefficient of output gap.

Laurence Ball's Direct Method

Laurence ball method is also used to estimate sacrifice ratio for different disinflationary periods. In this method, trend inflation is estimated for Q2–1996 to Q2–2016. Here trend inflation is defined as centered moving average of 9 quarters. So, trend inflation of time period t is moving average from t–4 to t+4. This shows that trend inflation is smoothed version of actual inflation.

To define disinflationary period, we first identified 'peaks' and 'troughs' in trend inflation. A peak is a quarter in which trend inflation is higher than previous four quarter and following four quarter. Similarly, for trough is a quarter in which trend inflation is lower than previous four quarter and following four quarter. A disinflationary period is an episode which start with peak and ends at a trough. Sacrifice ratio in these disinflationary periods are estimated by taking ratio of change in output and change in trend inflation.

The paper used the Whole Sale Price Index as an indicator of the price inflation while exchange rate and crude oil prices have been considered to control for the supply shock. The study uses a quarterly dataset with 80 observations from 1996–Q2 to 2016–Q2.

3.1 Dependent Variables

3.1.1 Wholesale Price Index (WPI)

WPI is price of a basket of wholesale goods. WPI is taken as an indicator of inflation.

3.2 Explanatory Variables

3.2.1 Whole Sale Price Index (Lag 1)

The lag of WPI by one time period has been used as an explanatory variable. Deriving from the theory of rational expectations, people expect that prices in period T would be revised by some proportion of the prices in period T–1. Usually a positive relationship is expected between the two in an economy where the inflation tends to increase year by year.

3.2.2 Output Gap

Output gap is difference between actual output and potential output. It should have positive impact on WPI because if actual output is more than potential output than it should impact employment positively which will lead to increase in bargaining power of labor as result of which they demand higher wages. This process will fuel prices through the wage price spiral.

3.2.3 Cash Reserve Ratio (CRR)

Used to control for the impact of monetary policy on inflation. Cash reserve ratio is minimum fraction of total deposits of customer that commercial banks keep as reserve with RBI. It will have negative impact on WPI. Increase in cash reserve ratio results decrease in WPI as the banks will leave with less money to advance loan and credit and pushes up interest rate. Increase in interest rate will result people to borrow less and consume less. Thus, the demand of goods and services goes down which will results in decrease in inflation.

3.2.4 Gross Fiscal Deficit

Gross fiscal deficit defined as the excess of total expenditure including loan of central government over revenue receipts. It is use as control variable. Gross fiscal deficit will have positive impact on WPI. Increase in fiscal deficit will lead to increase in output. Increase in output will increase employment which will increase bargaining power of labor. This will increase wages of labor and increase price of goods.

3.2.4 Exchange Rate

Exchange Rate controls for the impact of international trade on inflation. Increase in exchange rate will have positive impact on inflation. Increase in exchange rate means depreciation of Indian rupee which will make foreign goods expensive for domestic customer and cause increase in demand of domestic good which will lead to increase in price of domestic goods.

3.2.6 Crude Oil

Crude Oil used as a control variable imported inflation. There is a positive relation between crude oil and WPI. Crude oil is a major input for critical activities such as fueling transportation and heating homes. A rise in price of crude oil will lead to rise in input cost and increase prices of goods.

Table 1. List of dependent and explanatory variables along with sources

Variable	Transformation	Unit	Source
Wholesale price Index	Quarterly average of monthly WPI	Index	RBI
GDP (output)	Quarterly, seasonally adjusted	Indian Rupee, Billion	Stats.oced.com
Cash Reserve ratio	Quarterly	Percentage	RBI

Variable	Transformation	Unit	Source
Gross fiscal deficit	Quarterly sum of monthly Gross Fiscal Deficit	Indian Rupee, Billion	RBI
Exchange Rate	Quarterly average of monthly Exchange rate	Rupee per unit of Dollar	RBI
Crude Oil futures	Quarterly average of monthly crude oil	Indian Rupee	Investing.com

4. Analysis and Discussion

Table 2. Test of stationary

Variable	Test Statistic	P-value for Z(t)
Log (WPI)	−1.050	0.7344
Fiscal Deficit	−5.867	0.000*
Crude Oil	−1.718	0.4223
Exchange Rate	0.412	0.9688
Cash Reserve Ratio	−2.827	0.0545
Output gap	−3.272	0.0162*

Source: Results from the Stationarity Test using Stata

Table 2 presents the results of unit root test for stationary. At 5% level of significance it is found that only fiscal deficit and output gap are stationary. Other variables are I(1) series. So, this satisfy the condition of ARDL model that is dependent variable should be I(1) series and independent variable are mix of I(1) and I(0) series.

Table 3. Philip Curve (Equation 2)

ARDL regression				
Model: level				
Sample:	5–81			
Number of obs.	77			
Log likelihood	312.42903			
R-squared	.99904002			
Adj R-squared	.9987421			
Root MSE	.00482098			
log_wpi	**Coef.**	**Std. Err.**	**t**	**P>t**
log_wpi				
L1.	0.5192248*	.1294296	4.01	0.000
L2.	0.1611206	.0996855	1.62	0.111
Fiscal deficit				
--.	5.26e–06*	1.50e–06	3.50	0.001
L1.	4.32e–06*	1.77e–06	2.44	0.018
L2.	4.13e–06*	1.69e–06	2.44	0.018
L3.	2.72e–06	1.73e–06	1.57	0.122
Crude oil				
--.	0.0003945*	.000082	4.81	0.000
L1.	−0.0001242	.0000969	−1.28	0.205
Exchange rate				
--.	0.0011436*	.0004415	2.59	0.012
L1.	−0.0009482	.0004865	−1.95	0.056
Output gap				
--.	0.1599825	.1476371	1.08	0.283
L1.	0.3687794*	.1676111	2.20	0.032
CRR				
--.	0.0006236	.0010907	0.57	0.570
L1.	−0.0005385	.0013428	−0.40	0.690
L2.	−0.0026079*	.0012779	−2.04	0.046
L3.	0.0017159	.0011176	1.54	0.130
Trend	0.0012258*	.0004079	3.01	0.004
_cons	0.7945409*	.2220484	3.58	0.001

Source: Regression analysis using ARDL regression

ARDL model is estimated from a recursive search of optimal numbers of lag through Akaike Information Criteria (AIC). The high value of R square in the regression of about 0.999 represents the fact that our model is capable of explaining most of the variation in the dependent variable.

Log (WPI); at 5% level of significance log of WPI is significant at lag 1. Ceteris paribus, 1 percentage point change in inflation (WPI) at time period t–1 will increase WPI by 0.51 percentage point in time period t.

Output gap; at 5% level of significance output gap is significant at lag 1 and 2. Ceteris paribus, actual output 1 percent above its potential level in period t−1 pushes up WPI by 0.36 percentage point in period t. Increase in actual output above potential output is due to increase in production which will result in increase in income of people. It takes time to people to change their consumption pattern. So there is no significant effect in inflation at time period t. In time period t+1 people will increase their consumption which will increase their demand and result in rise in price of goods and services. At time period t+2 due to increasing price people will keep their consumption constant but actual output will still more than its potential output which will result in excess supply and fall in prices of goods.

Cash Reserve ratio; at 5% level of significance CRR is significant at lag 2. Ceteris paribus, increase in CRR at time period t–2 by 1 percentage point will result in decrease in price of WPI by 0.0026 percentage point at time period t. A fall in CRR is expected to boost the aggregate demand in the economy by stimulating investment due to lower lending rates. As this is long process so it CRR will not have immediate impact on inflation.

Exchange Rate; at 5% level of significance exchange rate is significant at lag 0. Ceteris paribus, depreciation of Indian rupee will have immediate impact on WPI and it will increase WPI by 0.0011 percentage point. As imports form a sizeable portion of the consumption basket, increase in their price is expected to increase price of a household's consumption basket and hence add to the existing inflation.

Crude Oil; at 5% level of significance crude oil is significant at lag 0. Ceteris paribus, increase in price of crude oil will have immediate impact on WPI. One unit increase in oil price will increase WPI by 0.00039 percentage point. As crude oil is majorly use as input in critical activities like transportation. So increase in price of crude oil will result in increase in cost of product and will lead to increase in inflation.

Fiscal Deficit; at 5% level of significance fiscal deficit is significant at lag 0, 1, 2. Ceteris paribus, 5.26e–06 percentage point is increase in WPI due to increase in fiscal deficit by one unit. 4.32e–06 percentage point is increase in WPI one period after temporary increase in fiscal deficit. 4.13e–06 percentage point is increase in WPI two periods after temporary increase in fiscal deficit.

Estimated sacrifice ratio is 1.30 percentage points. This means that a decrease in inflation will cause a 1.30 percentage point decrease in output of India.

4.1 Robustness Test

To test the robustness of model modified Philip curve is estimated using finite distributed lag model in which dependent variable is difference between log WPI at time t and log WPI at time t–1.

Table 4. Modified Philip curve (Equation 3)

Source	SS	df	MS	Number of obs	78
Model	.002807666	16	.000184304	F(15, 62)	6.22
Residual	.001721816	61	.000028467	Prob > F	0.0000
Total	**.004529483**	**77**	**.000058824**	R-squared	0.6199
				Adj R-squared	0.5202
				Root MSE	.00531

Diff_log_wpi	Coef.	Std. Err.	t	P > t
Output gap				
--.	.0410224	.1534032	0.27	0.790
L1.	.3891609*	.1841263	2.11	0.039
L2.	–.5171986*	.130107	–3.98	0.000
CRR				
--.	.0003701	.0011856	0.31	0.756
L1.	–.0006067	.0014791	–0.41	0.683
L2.	–.0026883	.0014003	–1.92	0.060
L3.	.0029084*	.0011345	2.56	0.013
Fiscal deficit				
--.	1.79e–06	1.33e–06	1.34	0.185
L1.	–4.33e–07	1.43e–06	–0.30	0.764
L2.	–2.99e–08	1.40e–06	–0.02	0.983
L3.	–1.70e–06	1.38e–06	–1.24	0.221
Exchange rate				
--.	.0012635*	.0004842	2.61	0.011
L1.	–.0013374*	.0005222	–2.56	0.013
Crude oil				
--.	.0004331*	.0000876	4.94	0.000
L1.	–.0003573*	.0000848	–4.21	0.000
Trend	–.0000715	.0001328	–0.54	0.592
_cons	.007115	.0139374	0.51	0.612

Table 4, at 5% level of significance, output gap is significant at lag 1 and 2. Ceteris paribus, actual output 1 percent above its potential level in period t–1 pushes up ratio of WPI and its lag value by 0.38 percentage point in period t. whereas at time period t–2 actual output 1 percent above its potential level decrease ratio of WPI and its lag value by 0.51 percentage point in time period t. Relation between output gap and WPI is similar in both Philip curve (Table 3) and modified Philip curve (Table 4). Hence, the model used to estimate sacrifice ratio is robust.

4.2 Time Variant Sacrifice Ratio

To estimate time variant sacrifice ratio interactive dummy is used for last 10 years from year 2006 to year 2015 (Table 5).

Table 5. Sacrifice ratio with time varying parameters

ARDL regression	
Model: level	
Sample:	5–81
Number of obs	77
Log likelihood	338.76903
R-squared	.99951568
Adj R-squared	.99903135
Root MSE	.00423054

log_wpi	Coef.	Std. Err.	t	P>t
log_wpi				
L1.	.3892123*	.1382728	2.81	0.008
L2.	–.2508599	.1491579	–1.68	0.101

log_wpi	Coef.	Std. Err.	t	P>t
log_wpi				
Fiscal deficit				
--.	−9.21e−07	1.89e−06	−0.49	0.629
L1.	5.19e−07	1.63e−06	0.32	0.752
L2.	2.46e−06	1.65e−06	1.49	0.144
Crude oil				
--.	.0004332*	.0001074	4.03	0.000
L1.	−.0001275	.0001383	−0.92	0.362
L2.	−.0002108	.0001375	−1.53	0.134
L3.	.0003758*	.000121	3.11	0.004
Exchange rate				
--.	.0023834*	.0006469	3.68	0.001
L1.	−.0011524	.00069	−1.67	0.103
Output gap				
--.	−.0925277	.1804669	−0.51	0.611
L1.	.4806318*	.2032421	2.36	0.023
L2.	−.2826006**	.1416679	−1.99	0.053
CRR				
--.	.0019828	.0011189	1.77	0.084
L1.	.0009578	.0012453	0.77	0.447
L2.	−.0027973*	.0011348	−2.47	0.018
wpid2006	−.0018984	.0014876	−1.28	0.210
wpid2007	−.0058671*	.0028653	−2.05	0.048
wpid2008	−.0015339	.0025628	−0.60	0.553
wpid2009	.0077267*	.002867	2.70	0.010
wpid2010	.0055826*	.0018906	2.95	0.005
wpid2011	.00656*	.0025861	2.54	0.015
wpid2012	.0096525*	.0026845	3.60	0.001
wpid2013	.0074568*	.0031282	2.38	0.022
wpid2014	.0016454	.0030148	0.55	0.588
wpid2015	−.0036329	.0028982	−1.25	0.218
outpd2006	1.012869	1.120351	0.90	0.372
outpd2007	4.378737**	2.506646	1.75	0.089
outpd2008	.0282371	.4910002	0.06	0.954
outpd2009	.8235722*	.3949552	2.09	0.044
outpd2010	.7727374	.6601943	1.17	0.249
outpd2011	.8770031**	.4440938	1.97	0.056
outpd2012	−2.477188	1.860678	−1.33	0.191
outpd2013	−1.324818	1.538207	−0.86	0.394
outpd2014	5.224688*	2.513036	2.08	0.044
outpd2015	−9.225543**	5.162199	−1.79	0.082

log_wpi	Coef.	Std. Err.	t	P>t
log_wpi				
Trend	.0040937*	.0009674	4.23	0.000
_cons	2.08615*	.4349148	4.80	0.000

As shown in Table 4, at 5% level of significance Log WPI is significant at lag 1 and showing a positive relation. So, increase in WPI at time t−1 will lead to .38 percent increase in inflation. For output gap at 5% level of significance it is significant at lag 1 and at 10% level of significance output gap is also significant at lag 2. Using time variant coefficients of WPI and output gap sacrifice ratios is estimated and plotted against time as shown in Figure 1.

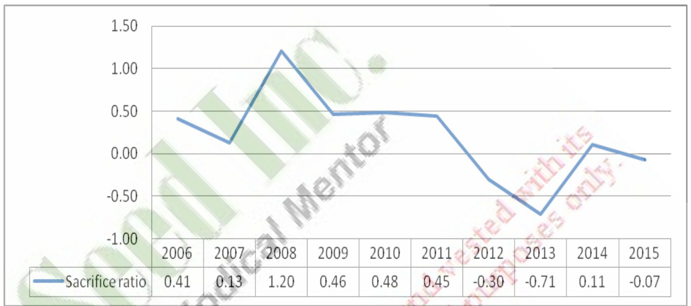

Figure 1. Sacrifice ratio over time

Sacrifice ratio estimates is found to be around average level in year 2006 and 2009 to 2011. During financial year 2008–09 government final consumption increase by 20.2 percent which results in excess demand of goods and services. This excess demand resulted in increase in prices of goods and high inflation during that period. Due to this sacrifice ratio is highest in year 2008. However, sacrifice ratio is falling from year 2011 to year 2013 due to economy slowdown. Industrial sector is majorly impacted by this economy slowdown which resulted in decrease in production and increase in output gap. Inflation was also declined during this time period but continued to be above comfort zone.

4.3 Sacrifice Ratio and Monetary Policy

Sacrifice ratio is also compared which monetary policy for year 2006 to 2015. As shown in Figure 2, it is showing relation between sacrifice ratio and currency to GDP ratio. On left axis I have taken currency to GDP ratio and on right axis sacrifice ratio is taken. It is consider that increase in currency to GDP ratio means expansionary monetary policy whereas decrease in currency to GDP ratio means contractionary monetary policy. Both sacrifice ratio and currency to GDP ratio are moving simultaneously from year 2006 to 2008. Correlation between ratio and currency to GDP ratio is 0.55 which means there is a positive relation between expansionary monetary policy and sacrifice ratio.

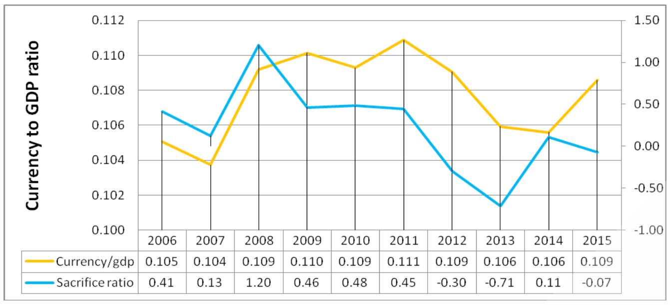

Figure 2. Sacrifice ratio and GDP/currency ratio.

There is monetary contraction in year 2007, 2010 and 2012 to 2014. Average sacrifice ratio for expansionary monetary policy is found to be 0.49 and for contractionary monetary policy it is found to be –0.059. This shows that sacrifice ratio is high for expansionary monetary policy relative to average sacrifice ratio in contractionary monetary policy. After September-2008 government has increase liquidity in market by incorporated a series of downward revision in policy rates. However, due to worldwide recession there was a decrease in export growth rate in the beginning of financial year 2009–10. This resulted in excess supply of goods in domestic market and fall in price of goods and services. This resulted in decrease in inflation and fall in sacrifice ratio. In 2014–15 there was an increase in both government and private consumption which resulted in excess demand of goods and increase in inflation. As there is minimal decrease in currency to GDP ratio which is offset by drastically increase in consumption which resulted in increase in inflation and sacrifice ratio. In financial year 2015–16 there is weak growth of world output and due to declining oil price resulted in decline price of good and reduction in sacrifice ratio in year 2015. This show that overall there is positive relation between monetary policy and sacrifice ratio. But during period of slowdown this relation is distorted by changes in external factors.

4.4 Sacrifice Ratio and Fiscal Policy

Figure 3 is showing relation between sacrifice ratio and fiscal policy. On left axis I have taken fiscal deficit as percentage of GDP and on right axis sacrifice ratio is taken. It is consider that increase in fiscal deficit means expansionary fiscal policy and decrease in fiscal deficit means contractionary monetary policy. As shown in Figure 3 both sacrifice ratio and fiscal deficit are moving simultaneously. Correlation between sacrifice ratio and fiscal deficit is 0.33 this shows positive relation between fiscal policy and sacrifice ratio. There is fiscal contraction in 2007, 2010, 2012, 2013 and 2015.

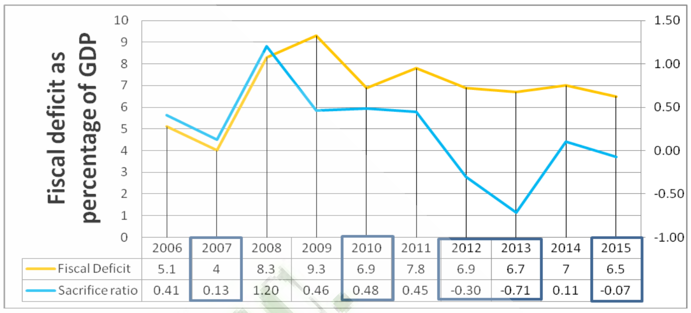

Figure 3. Fiscal Deficit and Sacrifice ratio.

Average sacrifice ratio in period of fiscal contraction is estimated at –0.011 and in case of fiscal expansion it was estimated at 0.554. This shows that sacrifice ratio is high for expansionary fiscal policy relative to contractionary fiscal policy. As explained earlier in financial year 2009–10 decrease in export growth resulted in decrease in sacrifice ratio. So, in this case also overall relation is positive between sacrifice ratio and fiscal deficit is positive both are moving simultaneously except in year 2009–10.

4.5 Sacrifice Ratio using Laurence Ball Method

In this section, sacrifice ratio is estimated using Laurence Ball method.

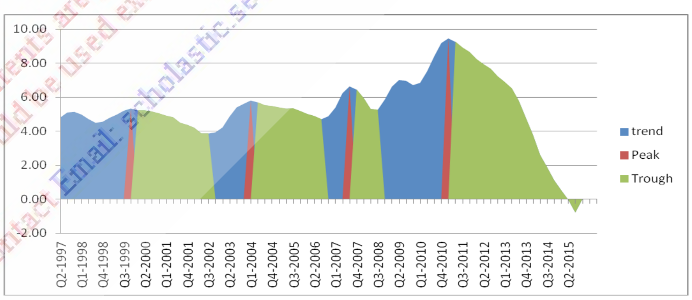

Figure 4. Trend inflation.

Table 6. Sacrifice ratio for disinflationary periods

Period	Start	End	Output gap	peak Inflation	Trough inflation	change in inflation	Sacrifice ratio
1	Q4–1994	Q3–2002	6.6985	5.34	3.87	1.47	4.55
2	Q1–2004	Q3–2006	–1.7241	5.81	4.71	1.10	–1.56
3	Q3–2007	Q3–2008	2.3122	6.64	5.27	1.38	1.68
4	Q1–2011	Q3–2015	2.8206	9.47	–0.79	10.25	0.28

Figure 4 is showing plot of trend inflation against time. Here, trend inflation is estimated by taking centered moving average of nine quarters. As shown in Figure 4 episodes are identified as disinflationary period.

Table 6 it is showing sacrifice ratio for different disinflationary periods that are identified. In all four episodes, sacrifice ratio is highest in period year 1995 to 2002 and least in period year 2004 to 2006.

Comparing, the results of direct method with aggregate supply curve approach. In case of disinflationary period 2011 to 2015 sacrifice ratio is ranging from –0.71 to 0.45 and direct method has estimated sacrifice ratio of 0.28 which is within the range. So, this shows that during disinflationary period both approach are showing similar results.

5. Conclusion

This paper examine sacrifice ratio for India using two major techniques i.e. aggregate supply curve approach and Ball's approach. Estimates of sacrifice ratio implies that a 1 percentage point reduction in inflation cause a 1.3 % reduction in output. From year 2006 to year 2015, sacrifice ratio is estimated in range of –0.71 to 1.20. It is discovered that Crude oil, exchange rate and fiscal deficit are having immediate impact on inflation. However, change in output gap is impacting inflation in next quarter. Cash reserve ratio is impacting inflation after two quarters. It is found that average sacrifice ratio is higher in expansionary RBI policies relative to contractionary RBI policies.

From year 2006 to 2015 sacrifice ratio is found to be highest in year 2008 due to increase in government final consumption and during year 2013 sacrifice ratio is lowest due domestic economy slowdown which had impacted industrial sector of India. This shows that sacrifice ratio varies over time due to government intervention, major crisis and slowdown in an economy.

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Annexure-I

Estimating the Sacrifice Ratio for Indian Economy: An Empirical Study

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Do Macro Economic Variables and Nifty 50 Move Together?

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Abstract

The stock market moves in contagion with many variables at macro level from the economy. The changing patterns and trends in inflation, interest rates, exchange rates and related parameters for an economy may create an impact on the stock market movements. In the present study, we have attempted to analyze that whether the macroeconomic variables (exchange rate, foreign direct investment, foreign exchange reserves, index of industrial production and wholesale price index) move in line with National Stock Exchange's index (Nifty 50). Johansen Co-integration analysis along with Vector Auto Regression model has been used on a monthly data from January 2009 to March 2018 to interpret the results. It ha s been found that there is no co-integration between the variables in the long run.

Keywords: Co-Integration, Macroeconomic, Nifty 50, VAR

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1. Introduction

Ross (1976) gave a theory known as Arbitrage Pricing Theory which stated that returns for a given variable may be influenced by macroeconomic variables in existence. In context to this relationship many researchers have attempted to gauge the long run and short run association between macroeconomic variables and stock market movements. Sadhu et. al (2013) found movement from stock market to oil prices but not vice versa in long run. Srivastava (2010) deduced that domestic macroeconomic variables (WPI and interest rates) were stronger than global factors in determining stock market movements. However, the results varied with different data sets and variety of macroeconomic parameters taken in various research studies. The behavior of stock market movements along with macroeconomic factors still has ample scope for research and many variables may still be inculcated to widen the horizon of study in this area. In the present study, five relevant parameters (exchange rates, foreign direct investment, foreign exchange reserves, index of industrial production, whole price index) have been taken with nifty 50 (as benchmark for stock market movement) to find out association between them in the long run.

*Author for correspondence

2. Review of Literature

Year of Study	Author (s)	Excerpts
2012	Elly & Oriwo	The study investigated using regression analysis impact of macroeconomic variables (lending rate, inflation rate, 91 days T-bills rate with Nairobi Stock Exchange index. There was a weak positive relationship between inflation and market performance. On the other hand 91 days T-bill depicted a negative correlation during March 2008–2012 (monthly).
2014	Srinivasan & Karthigai	The domestic gold prices were not found significant in forecasting stock prices in India. There was no causal linkage between gold prices and stock prices or vice versa in the short run. Using autoregressive distributed lag bounds testing approach and granger causality test from June 1990 to April 2014 (monthly) it was concluded that there were no significant association between variables.
2017	Aggarwal & Saqib	Nifty 50 was found to be significantly affected by US GDP, S&P 500, gold prices, Indian WPI, fiscal deficit and exchange rate. Multiple regression results from 2001–2016 (monthly) showed the impact of macroeconomic variables on the Indian stock market.
2010	Dharmaraj	S & P CNX Nifty index movements were found to be influenced by FIIs during 2006–2009 (monthly). However, the stock market volatility showed lesser impact from FIIs. Using linear regression model and Pearson correlation results were found indicating dependence. The study had broken the data into different structures based on bull phase, recessionary phase, swinging phase to name a few to minutely locate the impact of FIIs.
2011	Mishra & Singh	The study analyzed the data of monthly stock returns from BSE and NSE as dependent variables with inflation, exchange rate, IIP, FII and interest rates as independent factors. It was depicted that from November 1998 to July 2008 (monthly) Generalized Additive Model (GAM) was better fitted than OLS (Ordinary Least Square Method) for predicting returns of stock markets from the selected macroeconomic variables.
2008	Liu & Shrestha	Macroeconomic variables (money supply, industrial production, inflation, exchange rate and interest rates) were tested for co-integrating relationship between indices of China's stock market during January 1992 to December 2001 (monthly). It was found using JJ, OLS and GARCH model that the variables were move together in the long run. IP and MS had positive relationship but rest of the variables showed negative relationship.
2001	Lee et al.	Malaysian stock market was tested for both short and long run relationship with macroeconomic variables (interest rates, money supply, industrial production, inflation, exchange rates and trade balance). It was found that both stock market indexes was co-integrated with other variables in both short and long run using co-integration analysis (VAR model during 1987–1997.
2002	Gallagher & Taylor	The study analyzed stock price behavior with demand and supply macroeconomic shocks during 1949–1997 with appropriate structural breaks. VAR model had been used to conclude that the demand shocks resulted into temporary effects while supply side showed a permanent impact. .
1989	Schwert	The association between monthly stock returns with other variables (bond returns, inflation, interest rate, industrial production and money growth) were tested between 1857 to 1987 using squared standard deviations (similar to ARCH model). It was found that during the Great Depression (1929–1939) stock market volatility went unusually high.

3. Research Methodology

The present study has used secondary data on monthly basis for exchange rate, foreign direct investment, foreign exchange reserves, index of industrial production, wholesale price index and nifty 50 for testing association between them in the long run. The data of all variables has been taken from January 2009 to March 2018 from the websites of Reserve Bank of India, Department of Industrial Policy & Promotion and National Stock Exchange. Co-integration analysis may be applied with an assumption that the data is stationary at I(1), meaning that the data should be non-stationary at level and should turn stationary at first difference. So, as a preliminary condition unit root test was conducted with the help of Augmented Dickey Fuller test in eViews9 at level and at first difference (with intercept, trend and without trend). After satisfying the assumption of data to be stationary at I(1), Johansen Co-integration analysis was carried on raw data (level) to find out long run association between variables. VAR model was applied at first difference of the data as there were no co-integrating vectors found between the models. Wald χ^2 was applied with significant co-efficient(s) found in regression model through VAR to test their co-movement in the short run.

4. Results and Findings

4.1 Unit Root Testing

The primary requirement for applying Johansen Co-integration analysis is that the data must be non-stationary at I(0). Augmented Dickey Fuller test has been used with the help of eViews9 in three conditions; intercept, with trend and without trend. Table 1 below depicts the results for unit root testing of all variables at level. (E stands for exchange rate, F stands for FDI, Fx stands for foreign exchange reserves, Iip stands for index of industrial production, N stands for Nifty 50 and wpi stands for wholesale price index).

4.1.1 Unit Root Statistics (Level)

The null hypothesis for the unit root test (ADF) stands as: *All data are stationary*. The test failed to reject null hypothesis in case of FDI (with intercept and with trend) but the same could not be accepted without trend. In case of foreign exchange reserves, the test again failed to reject null hypothesis (with trend). However, it stood rejected (with intercept and without trend). Further, in case of index of industrial production, the test failed to reject null hypothesis (without trend). But, the same was rejected (with intercept and with trend). Therefore, it may said for all the six variables in the study that the data are non-stationary at I(0). Hence, we go ahead with testing them at first difference; I(1) for unit root.

4.1.2 Unit Root Statistics (First Difference)

Table 2 shows the statistics related to unit root test (ADF) with first difference of data. It has been found in case of all variables that the null hypothesis could not be rejected (except for Iip with trend; taken to be stationary with intercept and without trend) at 5% level of significance. Hence, it may be inferred

Table 1. Augmented Dickey Fuller test results at level (significance level; 5%)

Variable	Intercept	p-value	Trend	p-value	Without Trend	p-value
E	−0.811048	0.811	−2.353455	0.401	0.991656	0.914
F	−5.80445	0.000*	−8.359008	0.000*	−0.288902	0.579
Fx	−0.35722	0.911	−4.290159	0.004*	2.146456	0.992
Iip	−2.823196	0.058	−2.819566	0.194	−2.017962	0.042*
N	−0.659986	0.851	−2.585133	0.288	2.525156	0.997
wpi	−1.319449	0.618	−1.026794	0.935	−0.311351	0.571

Table 2. Augmented Dickey Fuller test results at first difference (significance level; 5%)

Variable	Intercept	p-value	Trend	p-value	Without Trend	p-value
E	−8.053127	0.000*	−8.014953	0.000*	−7.9655516	0.000*
F	−8.418216	0.000*	−8.375606	0.000*	−8.443569	0.000*
Fx	−26.63194	0.000*	−7.125084	0.000*	−26.38579	0.000*
Iip	−3.184564	0.023*	−3.349395	0.064	−2.8753003	0.004*
N	−10.28759	0.000*	−10.23627	0.000*	−9.699465	0.000*
wpi	−10.16728	0.000*	−10.42218	0.000*	−10.21383	0.000*

Table 3. Johansen co-integration results

Hypo-thesized No. of CE(s)	Eigen Value	Trace Statistic	Critical Value	p-value
None	0.316965	104.0609	95.75366	0.011
At most 1	0.270977	64.41515	69.81889	0.125
At most 2	0.1506944	31.54592	47.85613	0.637
At most 3	0.076122	14.55906	29.79707	0.807
At most 4	0.050309	6.3248	15.49471	0.657
At most 5	0.09154	0.956434	3.841466	0.328

that all data were stationary at first difference; I(1) meaning that Co-integration analysis may be applied on data.

4.2 Co-Integration Statistics

The data at I(0) were opened in VAR window to locate the lag length criteria (2) for running the co-integration analysis. The null hypothesis for running Johansen co-integration stood as; *there is no co-integrating vector in the data sets*. Table 3 shows the Eigen values and trace statistics obtained from Johansen Co-integration analysis in eViews9. It may be observed from the p-values corresponding to co-efficient as reflected in the test that none of the vectors were found to be co-integrated. Therefore, the test failed to reject the null hypothesis. Hence, Vector Error Correction Model could not apply and Vector Auto Regressive Model was to be run.

4.3 VAR Model

Further, as no co-integrating vectors could be found with the help of Johansen co-integration test, VAR model was applied on the first difference of data. Estimating the output through VAR 78 co-efficient were found (Table 4) in different equations out of which 11 were found to be significant at 5% level of significance. These co-efficient further called for testing for whether they moved together in determining the dependent lags.

Table 4. Co-efficient from VAR model equations

Co-efficient	t-statistic	p-value	Co-efficient	t-statistic	p-value
C1	2.695	0.073	C40	−0.23	0.817
C2	−0.891	0.373	C41	0.23	0.818
C3	−1.424	0.154	C42	0.697	0.486
C4	0.269	0.788	C43	−0.231	0.818
C5	−0.551	0.581	C44*	−3.287	0.001
C6	0.651	0.515	C45*	−4.766	0.000
C7	−1.369	0.172	C46*	−4.046	0.001
C8	−0.883	0.378	C47*	−2.571	0.010
C9	−1.009	0.313	C48	−0.039	0.968
C10	0.251	0.802	C49	−1.241	0.215
C11	−0.385	0.700	C50	0.006	0.994
C12	1.256	0.209	C51	−0.252	0.801
C13	0.755	0.450	C52	0.345	0.730
C14	−0.957	0.339	C53	−1.082	0.279
C15	0.506	0.611	C54	−1.774	0.076
C16*	−4.912	0.000	C55	0.238	0.811
C17*	−2.437	0.015	C56	−1.051	0.293
C18	−0.055	0.956	C57	0.327	0.744
C19	−0.356	0.722	C58	−0.099	0.921
C20	0.141	0.888	C59	−0.838	0.402
C21	0.179	0.858	C60	−0.614	0.539
C22	−0.175	0.861	C61	−0.367	0.714
C23	−0.41	0.682	C62	−0.495	0.620
C24	0.351	0.726	C63	1.38	0.167
C25	−0.488	0.626	C64	−0.339	0.734
C26	0.468	0.639	C65*	1.975	0.049
C27	1.159	0.247	C66	−0.371	0.711
C28	−0.009	0.992	C67	0.385	0.700
C29	0.036	0.971	C68	−1.028	0.304
C30	0.29	0.772	C69	−0.918	0.359
C31*	−7.594	0.000	C70	0.011	0.991
C32	−0.722	0.471	C71	−0.619	0.536
C33	0.379	0.705	C72	−0.041	0.967
C34	−0.212	0.832	C73	−0.677	0.498
C35	0.07	0.944	C74*	2.229	0.026
C36	0.637	0.525	C75	−1.748	0.081
C37	−1.698	0.091	C76*	5.792	0.000
C38	0.655	0.513	C77	−0.972	0.331
C39	1.637	0.102	C78*	2.49	0.013

4.4 Wald χ^2 Statistics

Table 5. Wald χ^2 results

Test Statistic	Value	Df	p-value
Chi-square	183.633	11	0.000

The null hypothesis for testing the co-efficient found in VAR model stood as; all co-efficient moves in line for predicting the dependent lags. Table 5 shows the statistics for Wald χ^2 which had been run with 11 co-efficient shown with the help of VAR model. The p-value here in the test indicated that all the co-efficient which were reflected through VAR model have been found to be significant at 5% level of significance meaning that they all moved together in the short run.

5. Conclusion

In line with Srinivasan and Karthigan (2014); Kumari (2011); Siddiqui and Seth (2015) the study concludes that there is no long run association between the macro economic variables and stock index movements. However, in the short run there were some co-efficient found to be strong enough from exogenous variables which may be able to forecast the endogenous variables in the model. However, the study is not far from limitations.

It may be possible that the results may be better with structured breaks. Also, factors like gold and silver prices, oil prices, consumer price inflation etc. may be taken for further study.

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Annexure-I

"Do Macroeconomic Variables and Nifty 50 Move Together?"

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Cyberbullying in India's Capital

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Abstract

Over the period of time, data charges in India are decreasing, infrastructure of data lines is increasing, due to good competition in the market availability of smart phones on cheap rates is also increasing. Other than this, users of social networking sites and mobile Apps are also increasing. Smart phones with attractive data plans are easily available these days to every economic group. Although the facility of getting connected with the world anytime through internet connected device has proved to be a boon for the society, yet it has helped introducing cybercrimes in the society. Cyberbullying is becoming a prominent cybercrime these days. Cyberbullying involves an aggressive behavior of an individual or a group of individuals whose intention is to insult others through social or electronic media. This paper informs the status of this crime in the capital of India, shows the awareness of cyber bullying among different age groups in Delhi and NCR and how much Delhi is getting affected out of it. The paper also gives few ideas to save people from being the victim of cyberbullying.

Keywords: Bullying, Cyber Crime, Cyberbullying

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1. Introduction

1.1 Bullying

Bullying is not a new born evil of the society. It is present since ages. Donegan observed its presence in 1530s too[21]. Olweus added in 1992 that bullying is repeated physical and psychological aggression shown by a more powerful person over a victim who feels it difficult to defend which impacts him/her very badly[18].

In 2011, Wong-Lo and Bullock defined bullying as one of the forms of peer aggression which can damage like conventional aggression does. (Mickie et al, 2011)[22].

The bully feels pleasure with a power of superiority in torturing the victim physically or verbally, directly or indirectly through other persons. The victim can be anybody eg- a student in school or college, an employee, a journalist, a beautiful teenager girl etc. bullying creates such an atmosphere in which the victim feels a lot of discomfort. It does not matter if the victim is a small child or

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an adult. This feeling of discomfort and restlessness is one of the biggest hindrance in physical and psychological growth and performance of an individual whether it is a child or an adult.

Bullying may involve various other activities like teasing, socially boycott, threatening, stalking, physical violence, sexual, religious and racial harassment etc. in 2008, Mason stated that the purpose of bullying is to create problems physically, emotionally or psychologically for others[20].

In 2011, Michel stated that although emerging social networking technology is a boon for the society as a whole as one can connect to others in seconds whereas it is also increasing emotional stress among children as well as adults if it is used too much[19].

Any society having the rat race of millions in which everyone wants to win and be on the top, where the feeling of being the winner crosses all barriers and feeling of help and care for the one who is weak lacks behind, where smart minds take undue advantage of innocents, bullying takes place. And in today's era of information technology and social media, this bullying is more horrific and has termed as cyber bullying.

1.2 Cyber bullying

In 2011 Olthof explained cyberbullying a strategic behavior of an individual who tries to dominate any other individual or a group of individuals[23].

A cyberbully harasses, makes negative comments, insults gives threats to the victims by using electronic and social media.

According to Olweus, (1986, 1993) impact of cyberbullying over victim is very deep and negative. Victims become depressed, sensitive and quiet. They avoid social gathering or joining groups over social media and become shy. Most of the time they are anxious and feel insecure and unhappy. In worst cases, victims become suicidal, immaterial of the fact whether they are children or adult. In this process. They slowly lose contact of their good friends ad find no one to talk or discuss about their feelings.

2. Classification of Cyberbullying[6]

Although in this era of social media there may be various innovative ways of cyberbullying but few methods are very commonly used. These are as below:

1. *Harassment*: sending messages through sms, e mail or social media to threaten or to make a mockery or to insult of an individual. Commenting rudely, posting embarrassing pictures which are not acceptable on social media. These acts cause emotional distress.
2. *Denigration* (defamation): sharing false information of anyone over social media which damages victim's reputation in the society. The victim can also be bullied by posting pictures which insult him/her socially. Bullies use popular websites, social media sites or apps to do such kind of acts. Sometimes people alter the photos of the victim and then post on social media in order to harass him/her.
3. *Flaming:* an attempt of using very offensive language to poke the victim to start an online argument in a group either to enjoy or to harass him/her.
4. *Impersonation:* acting of pretending to be another person for the purpose of entertainment or to harass the victim.
5. *Outing and Trickery:* this is the act of using tricks to cheat or revealing some secrets from the victim to forward it to someone else.
6. *Cyber Stalking*: the act of repeated use of social media or electronic media to harass the victim by sending frightening messages or e mails.
7. *Exclusion:* The act of compelling or creating such for someone to leave a group based on Apps, game sites, social media etc. bullying someone to an extent in a group so that he/she exits from that group on his/her own.
8. Accounts of innocent victims are hacked by bullies.
9. Children become victims of cyber threats and child pornography.

3. Cyberbullying Affecting Capital of India

Geetanjali Kumar, a psychologist working with school children in Delhi, calls the danger of cyber bullying a ticking time bomb. "All it takes for children to be on social media is to

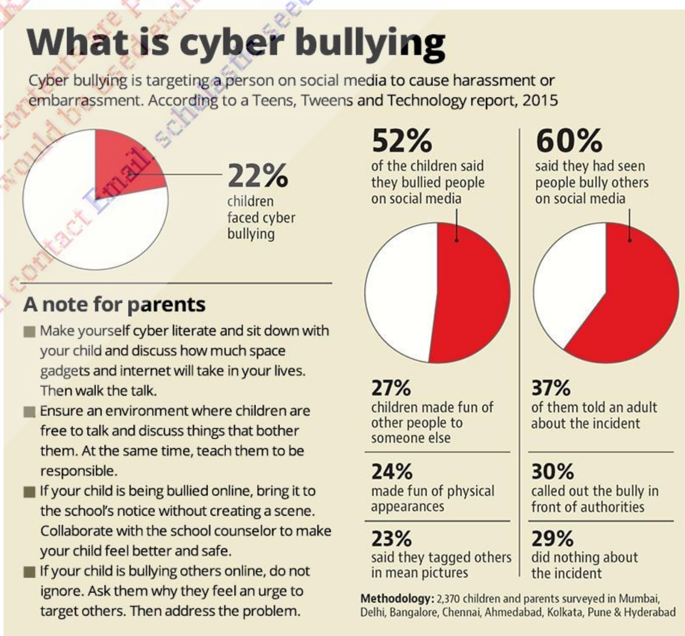
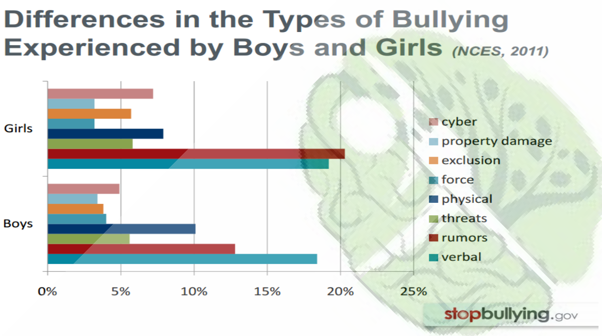


Figure 1. What is cyberbullying?

register with a wrong date of birth. But the sense of power it gives, helps children damaging others and not be sorry about it"[5].

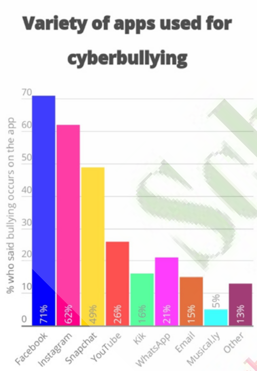
4. India Ranks 3rd on Global Cyber Bullying List[6]

A survey was conducted among 25 countries for checking cyber bullying rate amongst children and India was found on 3rd position whereas China and Singapore defeated India. This survey was done by Microsoft Corporations to understand the condition of cyberbulling against children globally.



Information source – www.the74million.org

Figure 2. Differences in the types of bullying experienced by boys and girls (NCES, 2011).

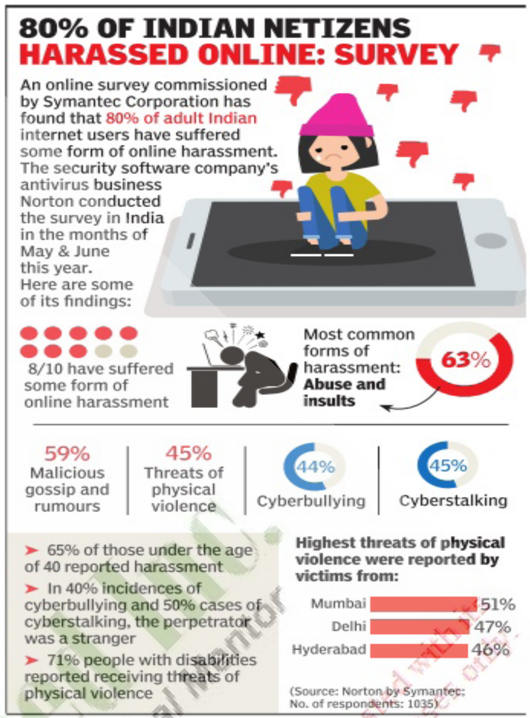


Information source – www.the74million.org

Figure 3. Variety of apps used for cyberbullying.

5. Delhi Police Study for Cyberbullying[8]

There was a survey done by Delhi Police in which it was found that cyberbullying supports so many other crimes also, like, stalking, molestation and rape etc. It's a sad affair to know that most of such crimes happen in public schools of Delhi in which



Information source - Oct 05 2017: The Times of India (Delhi)

Figure 4. 80% of Indian netizens harassed online: Survey.

students' family's economic background is good and they can afford easy access of social networking sites and groups.

Records of Delhi Police disclosed the facts that between the years 2014 and 2017, around 508 such cyber crime cases have been registered out of which 244 cases were registered under IT Act with IPVand 26 cases were of sexual harassment.

6. Objectives of Research

The effects of cyberbullying are very brutal to the victims emotionally and socially. In this research the following objectives have been considered:

- To create the awareness of cyberbullying among the people of Delhi & NCR as it is a new terminology and it can be widely seen across the nation.
- To identify the reasons of doing cyberbullying.
- To find out the characteristics of people who tend to be a victim of cyberbullying.
- To understand the various aspects of cyberbullying and how it is affecting the lives of victims.
- To have a thorough understanding about cyberbullying and find out feasible solutions for victims to come out of it so that they should not suffer any more in their lives.

7. Research Methodology

To achieve the objectives, a questionnaire having 9 simple questions related to cyberbullying was prepared. The questionnaire was filled by 2014 participants between the 15 to 62 years of age. All the participant were residents of Delhi & NCR. For data collection 10 schools, 5 undergraduate colleges, 5 post graduate colleges, 10 private organisations were visited which were situated in different locations of Delhi & NCR. The participants were also invited to fill the questionnaires online through Google forms.

8. Analysis

Out of all 46 responses were found incomplete and hence not included in the analysis of the data. Therefore, the sample size for the study remains 1968. The analysis of data is as below:

1. Participation in research gender-wise

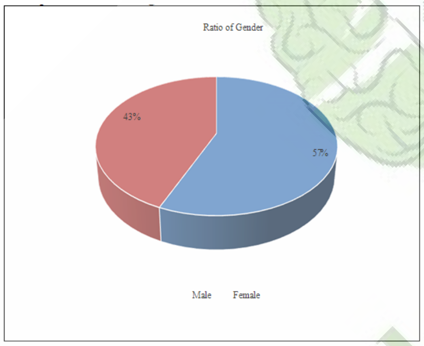


Figure 5. Participation in research gender-wise.

2. Participation of different age groups in research

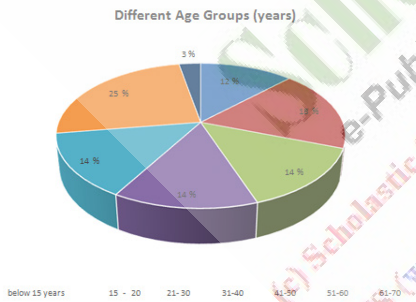


Figure 6. Participation of different age groups in research.

3. Respondents who were victims of cyberbullying
   When briefed about cyberbullying to the respondents through supporting literature given, 72% respondents agreed that they faced problem of cyberbullying in some or the other way, 26% of the people never experienced such a problem and 2% were not able to decide whether they had this problem or not.
4. Victim of cyberbullying: Role of gender
   When asked in the questionnaire that the cyberbullying is considered to be gender specific, 92% respondents answered that cyberbullying is not gender specific and both genders equally suffer due to it. 2% believe that the females are more vulnerable to cyberbullying whereas 6% respondents were not able to decide any answer for this question.
5. Reasons for getting victimized
   In response to the question, due to which reasons people got cyber bullied, 5% respondents indicated that innocence and extremely polite with others got bullied online. 22% confirmed that people who are extrovert in nature got bullied and 41% believe that introvert and quiet people become victimised more as compared with others whereas rest of the 31% respondents say that anyone can become victim to cyber bullying.

Figure 7. Reasons for getting victimised.

6. Reasons for people to be a cyberbully
   When asked about the probable reasons which provoke for getting engaged in cyberbullying, 55% respondents shared their opinion that instant anger is the cause, 48% mentioned that jealousy is the reason, 39% believe it to happen due to relationship break ups, 28% said that it happens due to religious rivalry. Jealousy, Relationship problem and aggression which are all commonly found in the youth of the nation and thus they must be handled with love and affection if they are going through a bad phase or else the cyber bullying situation may strongly prevail in the society.

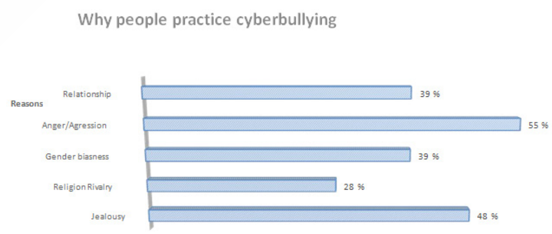


Figure 8. Reasons for people to be a cyberbully.

7. Effects of Cyberbullying on normal life

   It can be seen in the graph below that majority of the respondents believe that cyber bullying affects the normal life of the person badly. The graph is made upon the responses collected by the respondents.

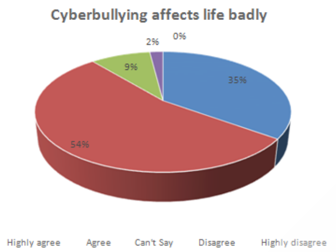


Figure 9. Effects of Cyberbullying on normal life.

8. Effects of cyberbullying on victims

   A question was included in the questionnaire to assess the impact of cyberbullying over the victims and 94% of the respondents believed that individuals if cyber bullied, will get affected emotionally and mentally badly whereas 62% felt that cyber bullying may also affect the social health of the victims. 33% participants felt that these incidents might affect the physical health of the victims.

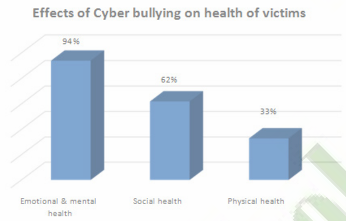


Figure 10. Effects of cyberbullying on victims.

9. Helping hands of the victims

   It can be seen that the majority of the respondents believe that the schools, Institutions, family and friends can help the cyber bullying victims and it is a very positive sign for our entire nation. It was evident from the data that 93% of the respondents told that there was not any policy formed by the school/college/institutions for the safety of the victims while 7% were unable to answer it. Nobody confirmed that they have such policies in their institutions.

   7% of the respondents who maintained that they would report the incident to the institutional authorities in case they ever get cyber bullied while 73% of cyber victims did not disclose it to anybody. 20% of the respondents feared that their reporting about being bullied will make them a subject of entertainment and fun for others.

9. Conclusion

A Tech Desk article in Indian Express highlights this Alarming situation that 50% Indian youths have experienced cyberbullying (Tech Desk|, 2014).

"Bullying is a community issue!" and that while schools are a very important part of finding solutions to bullying, they can't do it alone. Bullying happens to pre-schoolers, to adults in the workplace, in government, our legal system, in the media we connect with and even to our senior citizens. We need to talk about bullying as a community health and wellness issue in addition to the traditional focus as an education issues (Nigam Chayyanika, 2017).

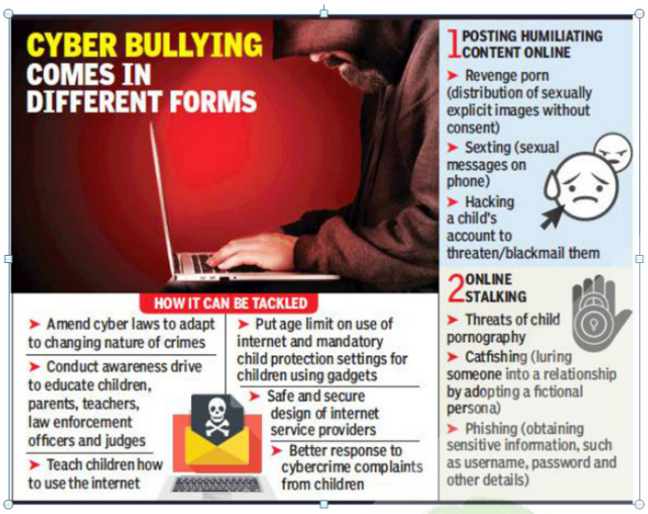
McAfee conducted a study in which it was found that 50% of youngsters in India have experienced cyberbullying in some or the other ways.

With the increased accessibility of Internet and smart phones to children and youth of the country, cyber crime is also equally increasing. And cyberbullying is affecting the psychological health very badly. Depression, mood disorders, insomnia and the feeling of guilt are primary symptoms that can be seen in the behavior of the victims.

Most of the victims don't even share their problems with anybody which increases their stress level and guilt and makes their mental and emotional condition even worse. It's need of the hour that institutes, colleges, universities and schools should start awakening programs of cyberbullying for students and parents both separately. Workshops should be arranged by educational institutions so that people will be aware of this evil of the society and will be more aware of cyber laws and safety measures.

10. Safety Measures

To keep themselves safe, users of social media may be suggested not to add unknown and strangers to their account, to be careful with the privacy setting provided by the social networking sites. Respecting cyber laws, not making account on unknown sites, blocking the abuser are also few of the methods to keep safe online. If there are a series of calls or the calls are part of a bigger picture of bullying then this may amount to harassment which is an offence under the 1997 Harassment Act. Making anonymous or abusive phone calls is also a criminal offence under section 43 of the Telecommunications Act 1984 (Negi Surabhi, 2016).



Information source – Times of India, 5 March, 2018

Figure 11. Cyberbulling comes in different forms.

11. Limitations

People were not supportive in sharing their experiences over the topic selected for study as the topic is very sensitive. The trust factor of the people was very low. Even after ensuring that comments and experiences of the victims will not be shared in public and their identities will be kept secret, most of them were hesitating sharing their experiences. Therefore, collecting a reasonable amount of response which was required for the study was really a big challenge for the research team.

Time allotted for this study was another challenge. The study was done through the samples collected from limited Institutions of Delhi & NCR due to lack of time.

Moreover, better results can be obtained if the same study can be conducted nationwide. A more appropriate approach would have been to collect data from different institutions from different states of India to make study more appropriate and useful for the nation.

12. Opportunities for Further Research

This study can be done on larger scale after doing segmentation of institutions. Separate studies state wise on school kids, college youth, working professionals, age and gender will give more fruitful results. More studies can be conducted based on interviews of the victims which will be helpful to get an idea of behavior and characteristics of bullied people and victims of cyberbullying.

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Annexure-I

Cyberbullying in India's Capital

ORIGINALITY REPORT

8%

SIMILARITY INDEX

PRIMARY SOURCES

1	www.businesstoday.in	Internet	74 words — 3%
2	indianexpress.com	Internet	43 words — 2%
3	www.endcyberbullying.org	Internet	42 words — 2%
4	www.hindustantimes.com	Internet	18 words — 1%
5	www.ijceronline.com	Internet	14 words — 1%
6	ierj.in	Internet	11 words — < 1%
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An Analytical Introspection of Work Related Stress; In Indian Corporate Sector

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Abstract

This paper in making a study of the Indian corporate sector and shall focus on identifying the levels in the frequency of the job-stressors for individuals in the corporate world. In that it shall seek to trace out the disturbing levels of work-related stress that affects most individuals. The study shall also seek to highlight the organizational changes and reforms that can be made be brought in by the management and Human Resource department so that employees experience minimum levels of stress at work and all kinds of conflicts at workplaces can be completely avoided. The main emphasis of this paper is primarily on the corporate world of contemporary India wherein occupational stress has been noticeably high. The main reasons for this are insufficient rest from work, excessive and immoderate work pressure, unsystematic delegation of work, monotonous work environment, lack of challenges at work, non-recognition of hard work, lack of rewards/incentives, unachievable deadlines, impractical work targets, inadequate utilisation of talent and skills, poor influence on worker's mental well-being etc.

This paper has gathered infuriation and other relevant data through a detailed survey of individuals employed at various companies, through a well prepared and exhaustive questionnaire that probes into the issues related to work-related stress. The sample body was substantial and allowed for a detailed study of the issue at hand, and all data sources were methodically used to analyse the present statistics. It must be said that the results are alarming. More than 85% of the individuals surveyed reported to be stressed due to their work, and about 80% claimed that better work hours and a more negotiable workspace relieved tension to a great extent. The study has deep implications for policy makers to manage the stress at corporate level.

Keywords: Corporate, Human Resource, Organizational and Emotional Wellbeing, Stress-Management

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Editorial Comment Column: Editorial board are in suitable alleyway answerable for the supremacy of the critique and cautious for recognize noteworthy 'worth mentioning topics', sourcing high quality manuscripts, handling schedule paperwork, and organizing the flow of manuscripts (i.e. from author to referees and back in a camera ready shape). The two most outcome mentioning attributes of any article suitable for GjEiS are (1) having a wide-ranging acquaintance of the subject area and (2) being organized. Depending on the dimension of the composition and its argument potency, the number of editors can range from one or two people to many more and sometimes to bring articulateness the blind reviewer process enabled to bestow with wide-ranging justice to time-honored editorial. Initially at the Time of Submission (ToS) submitted paper had a 11% plagiarism which is an accepted percentage for publication. The editorial board is of a surveillance that manuscript had a successive close watch by the blind reviewer's which at a later stages had been rectified and amended by a author (Anil) in various phases as and when necessary to do so. The reviewer's had in a first round customary in a minuscule span restructured by authors. The comments related to this text are extremely detectable related estimating the stress in corporate sectors in India both subject-wise and research well thought-out by the reviewers during evaluation and further at blind review process too. All the comments had been collective at an array of dates by the authors' in due course of juncture and same had been incorporated by the author in totaling. By and large all the editorial and reviewer's comments had been en suite in a paper at the end and further the script had been mark down and decisive under "**Case Based Study**" group as its things to see and illustrate consideration to the effort in relation to Introspection of Work Related Stress; In Indian Corporate Sector.

*Author for correspondence

1. Introduction

A certain amount of pressure is unavoidable in any kind of professional space. Tensions and stress can be caused to anyone working in any organisation. Several studies reveal that anyone, at any level of a company can be the victim of stress. In fact, stress is now known to be quite widespread and not limited to particular sectors, jobs or industries. A small amount of stress can help in staying motivated, enthusiastic, and can enable an individual to counter different challenges in the workplace. Dealing successfully with stress can give people a sense of triumph and can deeply motivate people. But in today's hectic world, the workplace often appears like an emotive roller coaster with long working hours, bound targets, and unending stresses. And when stress exceeds your ability to cope, it stops being helpful and starts initiating damage to your mind and body. The Health and Safety Executive (Palmer et al., 2004) specifies that work related stress is the negative and adverse result of individuals succumbing to tension and pressures. Williams (1994) describes 'stress' as "one of the most inaccurate words in the scientific literature" because it is used to describe "both the sources and the effects of the stress process." Contemporary modernity is the period of rapid increase in stress and tension levels, argues Coleman (1976). Beehr and Newman (1978) have further stressed that workplace stress is a phenomenon that compels an individual to create fluctuations in their daily routines for psychological reasons or other mental conditions.

It must be said that anxiety and stress in the workplace lead to workers dreading their offices. Lately, such a version to workplaces due to sheer increase in work pressure has become a global trend as stress has affected workers in all kinds of fields and industries, regardless of their work profile, designation, responsibility, hierarchy. Job stress is negatively associated to performance, higher the stress, lower the performance and vice-versa. And stress at offices can arise due to many reasons. It can be because of demanding schedules, pressurising teams, ineffective management, improper work environment, poor work culture, longish travels to work, hectic lifestyle etc. Stress can also be caused by lack of rest and recreation, unfriendly colleagues, unpromising future prospects etc. Work related stress is an adverse and unfriendly condition resulting in ill health effects, both physiological and psychological" (Cox, 1993). In 2013, APA's Center for Organizational Excellence carried out an excellent study on job-related stress and found out that workplace stress is indeed a serious matter. In United States of America, a majority of workers in the corporate space undergo chronic stress and complain that their offices do not help them manage pressure effectively. In this, stress is must be taken as a condition that can potentially lead to severe psychological and physical health problems. And as is clear, it is caused due to poor managerial systems.

1.1 Stress and Anxiety in the Workplace

An individual is defining by his/her work and other professional skills. It shapes their character and defines their personality, giving them ambition in life and a motive to look forward to the future. Work also allows individuals to better utilise their time, make good use of their abilities and talents, and train themselves to be better and productive part of the society and economy. However, work has now become a social determinant and a means to a materialistic end. People are driven to push themselves harder in their professional lives so that they achieve success in their careers and are respected in society. They forget that every individual has a limit to their ability to churn out results. Not every worker can be productive in the same way and to the same extent as the rest. This capability differs from one individual to the other. And if an individual reaches their saturation point, or hits their limit, without managing the situation well, they can face serious problems with regard to their mental and physical well being.

Indeed, stress due to work can cause detrimental results in the work output. It can also lead to sickness and depression that can in turn adversely affect the overall workspace and office environment. For this reason, it is important to recognise the factors that cause stress at work. Sometimes, the leading causes can be the nature of the work itself, and sometimes it can be because of personal lives of the workers. Sometimes it is a combination of both. Whatever the reason may be, it negatively impacts the performance of the affected workers, diminishing their productivity and creativity. Moreover, work stress can ultimately lead to workers feeling exhausted, depressed, demotivated, and listless. It can also cause medical issues due to hypertension, which over time lead to long-term illnesses or fatal diseases. The solution therefore is in the manner in which these issues are tackled at the workspace which will benefit not just the company but also the employees.

1.2 Coping with Job Stress

Acute responses to stress may be in the form of feelings like nervousness, misery, despair, irritability, fatigue, changes in behaviour like being withdrawn, destructive, upset, unmotivated and extent in thinking like problem in focusing on issues, reduction in problem-solving abilities, or physical ailments such as headache, nausea, breathlessness. If stress level remain spiked then over time, permanent changes can be there in neuro-endocrine, cardiovascular, autonomic and immunological functioning of the body, ultimately leading to heart and brain diseases. Situations which are impulsive and involve conflict, loss, job insecurity, performance targets and deadlines are the greatest cause of stress. It depends on personal characteristics of the individual to cope with the stress i.e. (time management and problem solving) and with congenial working conditions with social support. In most of the corporate sector companies, the tendency is to blame the workers who are actually the victims of stress. Lately however, it has been understood that there is no point in blaming the victims. It is essential to ensure that employers fulfill their responsibility and not overburden their workers. In fact, it is now being recognised that it is in their long term economic interest to ensure that stress is avoided so as to induce better results and better standards in work. Employer has to develop good workspace practices for ensuring that their organisation is successful and grows on a sustained basis. For this they must study the root cause of stress, and accordingly design strategies to combat it.

1.3 Individual and Organizational Stress Management Approaches

1.3.1 Individual Stress Management

Almost all initiatives to tackle health-related hazards caused by stress at workplace involve employer and employee both to work together to rise above it. Some of the strategies include counselling, training, teaching, clinical and career counselling and health checkups. The main objective of individual approach is to change individual skills and resources and help them to change their situation. Training and teaching helps in early detection of signs of stress and helps in devising an active plan to reduce the stressors and boost the self-confidence and motivation. A wide variety of training and learning skills also helps in developing active coping techniques - for example, confidence, interactive methods, communication, effective time management and multi-tasking abilities, problem solving capacity, and effective managerial methods. However, there are certain stress-determinants such as structural issues, management, culture and trends of the industry, which cannot possibly be altered. For such kind of sources of stress, stress management approaches are often not enough and may require counter strategies and incisive intervention methods so that they can be tackled. This include meditation, art of living counselling, yoga, exercises, even social gatherings, so as to relieve the employees by providing recreation and relaxation through workspaces. Without these methods, the individuals may continue to suffer and undergo more serious consequences of stress, and possibly even cause hurdles in the work of other employees as a result of frustration and anger.

1.3.2 Organisational Stress Management

The proper prevention and alleviation of stress caused at workplaces mainly involve intervention through the organisation alone. This may be of different kinds and can range from structural changes to managerial changes like changes in staffing, shifts and changes in time tables, changes in the office space, to other methods like providing comfort, encouragement and support, and providing rewards and recognition for good work. Thus, the study of stress causing agents must take into consideration all aspects of a professional space such as management and other organisational policies, as well as its existing approaches to tackling stress. The main emphasis of risk assessment strategy here is on prevention and to introduce protective measures to reduce the impact of stress. Threat identification i.e. identification of stressors at work place, deep assessment of harm by these work related stressors and their wide range of health related outcomes like smoking and drinking at the group and organisation level and also identifying, assessing existing management systems in relation to control of stressors are very important components of organisational stress management policies. Employers must therefore consider all the potential risk to the health and well being of the workers and make management control and employee support systems into proper order i.e. targeting equipment and material to counter ill effects of stress at organisational level. It has been observed, there is less association between workplace factors and psychological ill health and evidence based interventions to reduce this risk is scare in Indian corporate sector. Some intervention strategies are essential to keep the environment under control like training and organisational techniques, increase feedback support and communication system, increased participation in decision making can give substantial benefits to the organisation in terms of stress management.

1.4 Role of Managers and Employers in Dealing with Job Stress

1.4.1 Workplace Intervention and Mediation Programme: Organizational and Individual Approach

In the organisations of today; it is the employer and the manager who play an imperative role in capping the stress levels of employees. It is in the interest of both the employer and employee to keep the level of stress at the lowest level by *improving communication* with employees in friendly manner and sometimes by sharing some information related to them or by *introducing feedback system*. There are some more effective techniques which are very helpful in capping stress level like employee participation in job related matters and also to be realistic in giving targets to employees this will be very important in building their confidence levels. Strategies to be adopted need not be elaborate or expensive. Simply by planning the ways to *increase and improve communication* and recognize employees can be effective. The company can institute a *program to recognize workers accomplishments and promote some leadership programmes*. This will not only reduce major layoffs but also decrease the attrition rate.

- Recognising the signs of stress is extremely important for employers. Signs of stress can appear in number of ways like less concentration level, irritable, making more mistakes, coming late to the office, not taking lunch breaks, ignoring deadlines. There can be some physical symptoms like tired at work, rapid loss in weight.
- An employer role is even more significant in extending help to their employees to cope with stress at work is concerned. A undisclosed platform may be given to employees with the help of HR professional who can ask the employee for a quiet word and identify what support the business can offer to better help the employee to cope.
- Regular staff surveys can prove to be an effective tool, giving workers the opportunity to anonymously voice concerns about their jobs and even make some good suggestions as to how they would like to see management reduce on stress.

1.5 Short term Policies and Deliberations

Long term strategy to cope with stress is always a preferable strategy compared to short term. There are some *short term policies* that can be implemented and can go a long way in helping to cope up with stress, like stress management workshops, which can actually give relief to affected employee. Staff leave record assessment is also useful in this regard, if any employee has not taken leave then a gentle reminder and ensuring them that somebody will take care of your work, this can boost them and help in reducing their stress levels. Constant monitoring of their workloads i.e. no tolerance of unreasonable workload can actually spread smiles amongst employees. Little appreciation by manager i.e. "thank you" is highly appreciable in this regard.

1.6 Long-Term Deliberations and Concerns

The long term concerns are grave and take longer to resolve, but once done, the results lead to great success. The long term changes take more time but they also give mileage to reduce the stress level. Small changes like changes in seating arrangements, job shadowing, refresher training, flexible working hours, work from home, providing third party help under Employee Assistance Programme (EAP),short courses on relaxation techniques and time management, advertising on websites relating to healthy eating etc work wonders in alleviating stress and tensions.

- In an organisation there are managers on a cross section basis, who have varying and diverse management styles in them. There are some who believe in nurturing, empathic and supportive role and on the other hand there are some with nurturing, empathic and supportive, management style. There are many empirical proofs in many research studies that the behaviour of corporate managers can reduce stress to a great extent.
- If managers are able to establish a good rapport with their employees then that too leads to stress management in work places. By behaving in a cordial and respectful manner, managers must be able to make the employees work for them with dedication, simply because they feel appreciated.

1.7 Implications

In the beginning stages, stress doesn't seem to be a major concern. It seems part and parcel of modern day life and an inevitable result of hectic corporate life. Indeed, the consequences of stress do not show for a long time. But slowly, the impacted individual begins to feel the signs of it.

- *Frustration:* Excess stress and work pressure leads to frustration both at work place as well as within the personal life. An individual will not be able to focus on work productively on his task unless he has emotional and psychological fulfillment. He will also not be able to take new initiatives unless he is satisfied with the work as well as the management. Reasonable income, adequate perks, and properly defined work expectations and deadlines can allow for better functioning. The management has to ensure that each worker has been delegated work according to their proficiency and profile, without which the worker will not be able to perform up to mark.
- *Anger issues:* Anger and aggression caused due to poor work satisfaction is rather common amongst workers and that is a direct result of the frustration that they face due to improper handling of the management. If a worker is not given work that they are trained to do, or if they are not treated right by the authorities, and even if they are over worked, it can lead to anger problems. This problem even comes due to lack of credit for the work they did, due to absence of rewards for their performance, lack of promotion, favouritism at workplace, mistreatment or disrespect/insult, refusal to give benefits and bonuses, lack of due break/holidays, excessive work pressure, exploitation of any kind, and exertion.
- *Anxiety:* Anxiety is a chronic problem amongst professionals in today's time and age. Stress and anxiety are considered part and parcel of the modern world where everybody has to match up to a great level of proficiency, without which they will not be able to survive the job market. Anxiety is caused due to unfairness at work as well. If there is mistreatment and mismanagement at work then also it may lead to anxiety.
- *Tiredness and lethargy:* Tiredness and less productivity and even health problems, are caused due to stress.
- *Health Problems:* Low immunity, damaged skin and hair. In the personal life, problems such as impatience, inability to cope with problems, disinterest in family etc are some of the direct results of stress induced by occupation. In severe cases, it can lead to heart related problems like stress, cholesterol, stroke etc.

1.8 Measures to Tackle Occupational Stress

- *Respecting Subordinates and Being Supportive:* In high priority work which requires speedy and effective management, employees may often feel overworked and heavily burdened. In such a situation, it is understandable when managers get dissatisfied with the work of their teammates and other subordinates. In such a case, it helps considerably when the Manager keeps their emotions in check and conducts all interactions in a considerate manner.
- *Effective Management and Proper Communication of Workload:* It is necessary to always ensure that the Managers have made it clear to the staff about the upcoming assignments and other work so they can better manage their workloads. It's also good to take an open problem solving approach with employees. A collaborative approach wherein all the works work in conjunction with each other will help in making the employees feel capable and empowered.
- *Forming a Spirit of Team Work*: It always proves to be productive when a team works in unity, as a single unit. For this, the most important factor is having an open-door policy (although it is not always easy to achieve this, but it really will help to ensure that such a policy persists). Also, where it is possible, the seniors and managers must endeavour to empathies with employees and offer flexibility in hours, workload, or location to help employees manage their individual work/life balance.
- *Provide Support During Conflicts Situations:* The Managers must be able to manage conflict in all situations. This proves to be more challenging for some people than others. Where ever you see difficult situations arising, offer support and, if needs be, take responsibility for resolving the issue.
- *Proper Allocation of Work amongst Employees:* Managers should ensure that the nature of work suits the capacity of the workers and their talent/capabilities/training. There should be a complete avoidance of setting unreal expectations from workers. Realistic deadlines must be decided. The approach wherein Managers just get the work done is not practical or profitable in the long run. The employees will be able to prove their true value to the institution only after they are assigned the proper work as per their qualifications and specialisations.
- *Interactive Office Space:* An office space should not be exclusivist. It should not be strictly professional with very little social interaction. It is necessary to make sure that there is social participation and interaction amongst employees. For this, periodic activities and events must be conducted so that healthy interpersonal relations in workspaces between employees can boost the productivity and alleviate stress. Consistent interaction with them on an informal basis will greatly allow for stress-relieving.
- *Proper Assignments and Challenging Work Environment:* While it is true that employees shouldn't be over worked or over burdened. Inadequate and unchallenging work projects can also cause stress. Moreover, employees who have too little work also become burdensome to the company. Idle employees will not give any benefit to the organisation and will also end up losing their true potential and even lose opportunities to grow in their careers.
- *Loop in Human Resources:* The role of HR in managing stress levels in work spaces is very high. Indeed for managing work related tension, the HR department can buttress a culture of inclusiveness wherein the personal is integrated with the professional so that the workers do not always overlook their families and other aspects of their personal lives to fulfill work responsibilities. The HR can also devise ways in which each and every worker can effectively manage and handle their own tasks and achieve their targets which they set for their own selves. And when work becomes dull and tiring, the monotony can be broken by bringing changes to the daily routines, through creativity and even fun.
- *Have Realistic Standards:* It becomes important not to set unrealistic expectations from employees, only to meet the goals of the organisation or a particular team. Even though some projects require urgent and quick work, excellence cannot be achieved with shortcuts. The employees need the basic minimum time and resources to realise any goal. The Management must understand this and always delineate work according to realistic expectations. Thus, managers should not exert and push the employees with unreasonable targets.
- *Planning Events:* A work space can get oppressive and stressful oftentimes. It becomes important to make sure that there is adequate outlet for tensions and other worries. Break time can be used for planning recreational activities. Employees can be asked for ideas on how to uplift the mood of the office. Lunches and dinners outside the workspace, parties, picnics, and even short tours can help regenerate the workers. Indeed, some informal meetings such as this can work wonders in boosting the overall morale of the employees and refresh and rejuvenate them enough to take up new challenges with a clear head.
- *Hosting Wellness Programs:* Health and well being is very important for everybody, and when offices arrange wellness programs it can greatly help in relieving stress levels across. Consistent attention to the well being of employees can also lead to less number of sick holidays. For this, health camps, checkups, awareness on health related matters, nutritionist guidance, gym memberships etc can greatly help in improving the health of employees. Even matches can be organised so as to encourage healthy sportsmanship and improve activeness amongst all.

- *Family-orientation:* The personal lives of the workers should not be neglected. Families should be invited at company get-togethers so as to remain family-friendly. This kind of outlook that involves the family will improve the participation of the employee at a greater extent because of the support the family will provide in return. The workers would also feel motivated to do more as the family understands their work demands and other professional commitments. Furthermore, it will lead to greater satisfaction at work on all sides. This will help people living away from family as well.
- *Rewards and Incentives:* Improving interpersonal bonds at workplace can prove to be rewarding. Further, it can prove to be useful to periodically acknowledge and reward hard work and achievements through bonuses, incentives, leave, grants, as well as other benefits. The HR can help in this by regularly announcing the achievers and congratulating them publicly for their hard work. This will encourage people to hone their talent and other qualities and work on them so as to be able to gain rewards too. Certificates, trophies, and other accolades go a long way in providing motivation.
- *Fun Activities:* Making work more fun by including activities such as plays, can greatly help in making the overall environment of the workplace better.
- *An Efficient and Innovative HR:* The HR has to work diligently to ensure that all employees related issues are resolved and in fact avoided at every step. They must also ensure that the employees have the necessary stimulant that can inspire them to grow and achieve more and more. For this they must remain creative and proactive in their initiatives so that all the resources can be maximised to the fullest, and stress can be dealt with effectively.

2. Research Methodology

2.1 Objective of the Research

- To determine the major causes of work-related tension and stress, and provide solutions.
- To unearth the role of managers and management in determining how much stress is caused due to corporate policies, and how such stress can be avoided. HR's role is discussed in great detail.

2.2 Design of Research

This research is conclusive in nature and undertakes several discussions with regard to the sample survey that it conducted alongside.

2.2.1 Method of Sampling

- The number of participants was 62.
- The strategy was descriptive.
- The study was specifically designed to trace stress levels in workers of the corporate sector.

2.3 Tools

The survey has been carried out through questionnaires that contain appropriate queries.

2.4 Data Collection

The primary data was acquired through questionnaires. The secondary data was acquired through published research in journals and books.

3. Data Analysis and Interpretation

3.1 Interpretation

This section contains the survey results. It was revealed that More than 80% employees reported to feeling stressed due to work. The rest reported stress due to personal reasons. The percentage relating to work related stress is 87% and 13% stress was related with personal matters as shown in Figure 1.

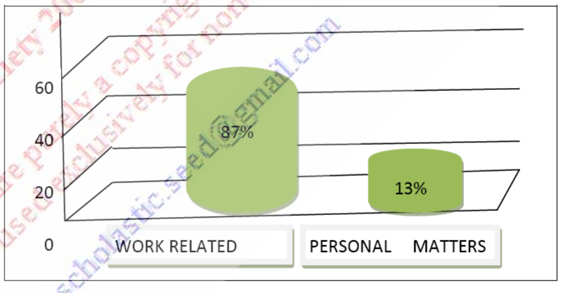

Figure 1. Employees who have been stressed.

Results revealing reduction in stress (Figure 2).

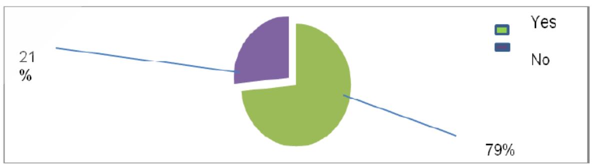

Figure 2. Flexible working hours or work from home options greatly releaves stress at workplace.

3.1.1 Interpretation

79% shows that flexible working hours enable the employees to reduce stress. Work from home option also allows workers to reduce stress because it is give liberty to the workers to stay at home in case of inability to travel great distance, or during illness etc. The benefits of such options are buttressed with technology that now allows workers to communicate live with the rest of the employees across the world through video conference. This allows for greater coordination as well, as the workers remain within the comfort zones of their homes. Godrej's has a policy of letting workers compress their work if they have given 42 hours a week, regardless of gender (Figure 3).

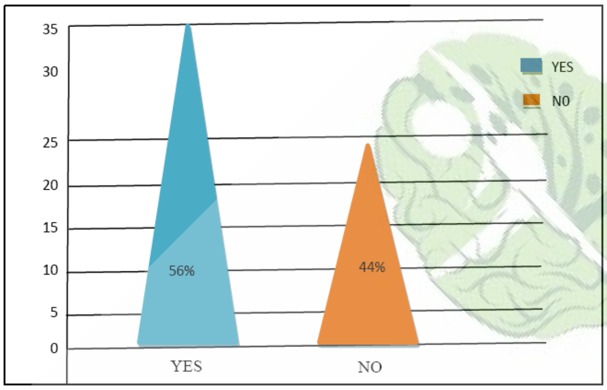

Figure 3. Unplanned leave from work due to stress or other reasons.

3.1.2 Interpretation

In today's time, the job scenario is such that that competition is increasing day by day. The labour market is in surplus where there are more and more able and competent workers and lesser jobs in comparison. Due to this there is a conflict between employee and employer where the latter will have several options with lesser price. This leads to reduction in salaries and makes the employees feel that they are underpaid. More than half (58% respondents) feel that they are underpaid or undervalued in their workplaces. This causes stress and also reduces self respect and self esteem (Figure 4).

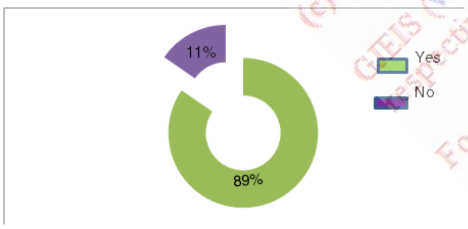

Figure 4. Rewards (non-monetary) to motivate workers and combat stress.

3.1.3 Interpretation

This includes the number of employees who received any sort of appreciation which may be non monetary in nature, and if that allowed them to feel better. More than 70% were for it and nearly 90% said that such acknowledgement of hard work did help them in reducing stress at work.

It must be said that recognition is needed at all times, and works well to inspire workers who have been working hard. It may be of many types. Sometimes, simply word of appreciation in front of people or even in private may do wonders. Otherwise, small tokens such as certificates of performance, gift coupons, option of taking leave etc are also provided.

Indeed, being appreciated and given due credit for the good work, allows one to stay motivated and gives tremendous satisfaction. On the other hand, steady neglecting of one's good work may lead to a feeling of dejection and depression, and may cause negative effect on one's emotions and even work (Figure 5).

Figure 5. Changes in attitude at professional/private space due to increase in stress levels.

3.1.4 Interpretation

About 75% of the individuals agreed upon the fact that their attitude alters due to work stress. Difference in work method and mood etc include lack of concentration, lack of motivation, no goal-oriented work and inadequate communication and initiative. Employees should also be counselled about work related stress.

3.1.5 Limitations

- There weren't enough candidates who were willing to be surveyed.
- There wasn't any method to map out the variations through the diverse body of corporate workers.
- The solutions offered in this essay are reliant solely on ideas and discussions with corporate bodies and participants.

4. Summary and Conclusion

To conclude, it appears that stress is part and parcel of everyday life. Each individual is faced with stress and tensions, especially in work space where the work pressure is high and the requirements of the job are several. Worries about financial stability, professional growth, and self-esteem are some of the factors that play a huge role in this. Stress seems unavoidable. However, individuals must ensure that stress is tackled with effectively and on a continued and sustained manner. If this is not done then it can lead to serious health problems and can also severely damage the personality and appearance of a person. The long-term effects on the mind and body are several and the growing trend in today's times of young individuals acquiring diseases is testimony to the same. It is therefore imperative that stress levels are reduced greatly and across different walks of life. In the corporate sector, stress levels can be tackled through a number of measures that can change the atmosphere of the office and make it more informal than formal. For instance, the integration of the personal/familial with the professional can prove to have great results. The mood of the office, if cordial and happy, can help avoid stress and tension and significantly improve the output of each individual. Through the steady cooperation of the managers, it can be ensured that not only are the employees not overworked and pressurised, but also feel appreciated and valued. Friendliness and being open to discussions can also go a long way in establishing a good rapport.

An appropriate standard in work is desirable. To ensure that employees don't get over burdened, but also don't get under worked and de-motivated, it is necessary to ensure that there is a proper drive towards the goals. For this the managers need to keep the workers inspired and full of zeal through steady encouragement and productive feedback system. Family and work balance must not be disturbed in this process because that in turn leads to several frustrations that adversely impact the output of an individual. The HR needs to give proper assistance in this.

However, while there are several solutions to the problems and many ways can be devised to tackle excessive stress and tensions in workplaces, it is also true that avoiding it cannot be possible at all times. There are times when the nature of work is such, or the deadlines are close, that workers need to put in extra effort and additional time, compromising on their sleep, family time, recreation etc, so as to complete the projects. In such a situation, a sustained effort at managing work while keeping in mind the saturation level in each individual.

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Annexure-I

An analytical introspection of work related stress; In Indian corporate sector

ORIGINALITY REPORT

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FDI in India - The Growth Trajectory

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Abstract

Foreign Direct Investment *(FDI)* has been viewed as a power affecting economic growth directly and indirectly during the past few decades. Our Prime Minister has also underlined this fact through his famous quote, "FDI for me is First Develop India and then Foreign Direct Investment". It is not only a critical driver of economic growth but also a chief source of owned financial resource for India. Since 1991, the regulatory environment for foreign investment has unfailingly been eased by India, catapulting it into the spot of one of the fastest-growing economies in the world. It has been ranked (9th in terms of FDI inflows for 2016 by UNCTAD) among the top attractive destinations for inward bound investments in the world.

Keywords: Economy, FDI, Growth, India

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Editorial Board Excerpt: Editorial board are in appropriate path liable for the preeminence of the article and careful for identifying significant 'noteworthy topics', sourcing high quality manuscripts, handling schedule paperwork, and organizing the flow of manuscripts (*i.e. from author to referees and back in a camera ready shape*). The two most significance mentioning attributes of any article suitable for GjEiS are (1) having a wide-ranging acquaintance of the subject area and (2) being organized. Depending on the size of the piece of writing and its argument strength, the number of editors can range from one or two people to many more and sometimes to bring articulateness the blind reviewer process enabled to bequeath with comprehensive justice to time-honored editorial. Initially at the Time of Submission (ToS) submitted paper had a 22% plagiarism which is an accepted percentage for publication as some of the contents are the author's self acknowledge work and copyright free material. The editorial board is of an observation that document had a successive close watch by the blind reviewer's which at a later stages had been rectified and amended by a author (Nidhi) in various phases as and when necessary to do so. The reviewer's had in a first round habitual in a miniature span restructured by an author. The comments related to this document are extremely perceptible related estimating the sacrifice ratio for Foreign Direct Investment both subject-wise and research judicious by the reviewers during evaluation and further at blind review process too. All the comments had been shared at a variety of dates by the authors' in due course of occasion and same had been integrated by the author in computation. By and large all the editorial and reviewer's comments had been built-in in a paper at the end and further the script had been mark down and decisive under **"Research Thought"** group as its highlights and draw attention to the work in relation to Foreign Direct Investment in an Indian perspective which is a Research Thought.

1. Introduction

Foreign based companies invest in India to take benefit of relatively lower wages and tax exemptions. For a country where foreign investments are being made, it also means achieving technical know-how and generating employment. The Government of the country, with intent to attract and promote FDI, has implemented a policy structure on FDI which is transparent, predictable and easily comprehensible. The favourable policy regime of Indian government and robust business environment have ensured that foreign capital keeps flowing into the country. Over the last few years the government has taken many initiatives like relaxing FDI norms across sectors such as defence, PSU oil refineries, telecom, power exchanges, and stock market, among others.

In the beginning of the year India has announced sweeping relaxations in FDI rules in single-brand retail and other areas besides allowing overseas carriers to acquire as much as 49% of Air India to help speed up its divestment. The moves came ahead of Prime Minister Narendra Modi's trip to the World Economic Forum in Davos, where he is expected to showcase the country's investment potential.

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2. Conceptual Framework

"FDI is fund flow between the countries in the form of inflow or outflow by which one can able to gain some benefit from their investment whereas another can exploit the opportunity to enhance the productivity and find out better position through its performance." The effectiveness of it depends upon the investor's perception, if long term investment is made then it makes a positive contribution towards economy, on the other hand if the investment is for short stinted only for the drive of making profit then it may be of little significance. The FDI can take any course or form to enter into any country. There are three principal forms of FDI in India they are "joint ventures, acquisition of assets in a country and Greenfield ventures".

In the words of the International Monetary Fund FDI is defined as "Investment that is made to acquire lasting interest in an enterprise operating in an economy other than that of investor. The investor's purpose is to have an effective voice in the management of enterprise".

The investors coming directly to India may acquire the 10% or more voting rights of any entity or enterprise through any of below methods:

- "By incorporating the wholly owned subsidiary or company.
- By acquiring the shares of an associated enterprise.
- Through the merger or an acquisition of unrelated enterprise.
- By participating in an equity joint venture with another investor".

3. Review of Literature

"Impact of Foreign Capital on Indian Economy"- Kurian K.M.

The author has looked into role of transnational investment in developing economies from multiple viewpoints. In some cases, the need for it is felt for priming of the pump', to enable under-developed economies to break away from the 'vicious circle of poverty', i.e. low incomes; poor savings; in adequate investment and therefore, stagnation and low incomes. In others, a TNC is believed to be a carrier of modern production technologies, rational and scientific industrial management culture and improved forms of organisation; an innovator and a risk taker in exploration and discovery of the known and unknown natural wealth in under-developed regions; a means to reach the world markets to augment the much-needed foreign exchange by poor economies; and/or an institution to seek co-operation with the developed countries in harnessing the comparative advantages offered by over-populated countries of the world for mutual advantage.1In India the role of transnational investment has been significant and expanding. Transnational capital has been generally viewed in the traditional perspective of the 'two-gap-approach'; wherein it is regarded as a means to fill the foreign exchange and technology gaps.

"Inflows of FDI in India"- Gulshan Akhtar (Research Scholar)

The scholar has underlined with data the fact that FDI has played a noteworthy role in the growth and development of Indian economy. "Our GDP has grown four-fold since the year 1991. FDI play multidimensional role in the overall development. It may generate benefits through bringing non-debt creating foreign capital resources, technology upgradation, skill enhancement, new employment, spillovers and allocative efficiency effects".

"An analytical study of FDI in India"- Abhishek Vijaykumar Vyas

The author has shown that, "how in the process of economic development foreign capital helps to cover the domestic saving constraint and provide access to the superior technology that promote efficiency and productivity of the existing production capacity and generate new production opportunity. Foreign investment plays a significant role in development of any economy as like India. Many countries provide many incentives for attracting the FDI. Need of FDI depends on saving and investment rate in any country. Foreign Direct investment acts as a bridge to fulfill the gap between investment and saving."

"FDI and telecommunications sector in India"
- Mohd.AzherParvez

The present paper discusses on the role of FDI in the development of telecom sector. Over the past decade the Telecom sector has experienced rapid growth owing to regulatory liberalization, however, the sector has been in turbulent phase started from 2014–2015 year, marked by legality of Long-Term Evolution (LTE), roaming agreements, one time Spectrum cost, reframing of allotted spectrum in the 2300 + MHz band, etc.

"A study on effect of India's foreign direct investment inflows and its economic growth" - M. Krithika

"Globalization and liberalisation brings lots of new innovative products to the world, Foreign Direct Investment is the one among this, also there are number of different forms of FDI is available currently. Recently, Government of India allowed FDI in different sectors of Indian economy. But several opposition parties are making it a political issue in parliament on these policy decisions and amendments" as stated by Dr. Shahul Hameedu.

"Role of FDI in India: An Analytical Study"- Dr. Jasbir Singh

International Economic Amalgamation plays a dynamic role in the development of any country. Foreign Direct Investment is one and the most important mechanism of attracting International Economic Amalgamation in any economy. It serves as a link between investment and saving. The paper highlights, "how many developing countries like India are facing the deficit of savings. This problem can be solved with the help of Foreign Direct Investment. Foreign investment helps in reducing the defect of BOP".

"Foreign Direct Investment: Impact on Indian Economy"- Bhavya Malhotra

The author brings out the fact that "with the initiation of globalization, developing countries, particularly those in Asia, have been witnessing a immense surge of FDI inflows during the past two decades. Even though India has been a latecomer to the FDI scene compared to other East Asian countries, its considerable market potential and a liberalized policy regime has sustained its attraction as a favourable destination for foreign investors. This research paper aims to examine the impact of FDI on the Indian economy, particularly after two decades of economic reforms, and analyzes the challenges to position itself favourably in the global competition for FDI".

"FDI in India"- Shalini Agarwal

Foreign direct investment plays an important role in the economic development of the country. It helps in transferring of financial resources, technology and innovative and improved management techniques along with raising productivity. An Indian company may receive Foreign Direct Investment either through automatic route or government route.

"An Overview of FDI in India"- Marimuthu K.N.

"This paper attempted to make an analysis of FDI in India and its impact on growth. It also focuses on the determinants and needs of FDI, year-wise analysis, sectoral analysis and sources of FDI and reasons. One of the economic aspects of globalization is the fact that increasing investments in the form of foreign direct investments. In the recent times due to the global recession most of the countries have not been able to pull investments".

"Foreign Direct Investment and Economic Growth in India" - R. Anitha

The paper brings out the important role of FDI in the development of the nation. It is more so in case of underdeveloped and developing countries. "A typical characteristic of these developing and underdeveloped economies is the fact that these economies do not have the needed level of savings and income in order to meet the required level of investment needed to sustain the growth of the economy".

"A study on effect of India's foreign direct investment inflows and its economic growth"- M. Krithika

Investment in a foreign country where the investor retains control over the investment is the essence of FDI. It usually takes the form of starting a subsidiary or acquiring a stake in an existing concern or starting a joint venture in a foreign country. "FDI implies that the investor exerts a significant degree of influence on the management of the enterprise resident in the other economy".

4. Research Methodology

The present work is a conceptual and detailed study of movement of FDI and FIIs in India and how the position of the economy has improved after the much talked economic reforms. The study is founded on secondary data. Various sources i.e. World Investment Reports, Asian Development Bank's Reports, various Bulletins of Reserve bank of India publications from ministry of commerce, Government of India and websites of eminent bodies like RBI, UNCTAD, World Bank. IMF, EXIM Bank etc., have been used for assimilating the data. The relevant data have been collected for the period of 1991 to 2017 in the form of time series.

5. Objectives

- To explore the relationship existing between inflow of FDI and GDP growth rates in defined period.
- To gauge the Impact of FDI on the Economic Development of India.

6. Data Analysis

6.1 Analysis of FDI Inflow

Inflow of FDI in India	
Year	**US Million ($)**
2000–01	2463
2001–02	4065
2002–03	2705
2003–04	2188
2004–05	3219
2005–06	5540
2006–07	12492
2007–08	24575
2008–09	31369
2009–10	25834
2010–11	21383
2011–12	35121
2012–13	22423
2013–14	24299
2014–15	30931
2015–16	40001
2016–17	43224

Years	FDI Inflows (X) in Million Dollars	GDP (Y) in Million Dollars
2011–2012	35121	182764
2012–2013	22423	185672
2013–2014	24299	203539
2014–2015	30931	208987
2015–2016	40001	226379
2016–2017	43224	243901

6.2 Regression

Variables Entered/Removed[a]			
Model	Variables Entered	Variables Removed	Method
1	FDI[b]	.	Enter

[a] Dependent Variable: GDP; [b] All requested variables entered

Model Summary[b]				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.727[a]	.528	.410	18113.33726

[a] Predictors: (Constant), FDI; [b] Dependent Variable: GDP

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1.	Regression	1468815705.053	1	1468815705.053	4.477	.102b
	Residual	1312371946.281	4	328092986.570		
	Total	**2781187651.333**	**5**			

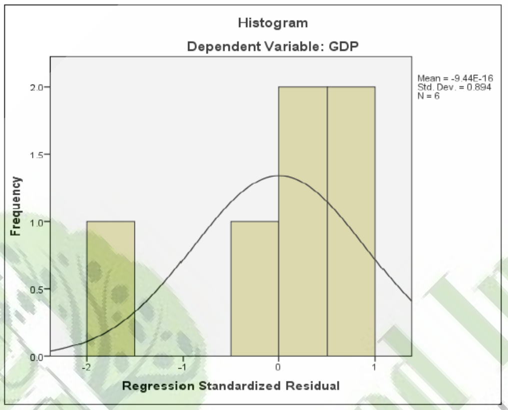
[a] Dependent Variable: GDP; [b] Predictors: (Constant), FDI

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1.	(Constant)	141547.800	32514.269		4.353	.012
	FDI	2.051	.969	.727	2.116	.102

Coefficients[a]			
Model		95.0% Confidence Interval for B	
		Lower Bound	Upper Bound
1.	(Constant)	51273.718	231821.883
	FDI	–.640	4.742

[a] Dependent Variable: GDP

Residuals Statistics[a]					
	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	187532.9375	230191.6719	208540.3333	17139.51986	6
Residual	−30810.02734	13709.32129	.00000	16201.06136	6
Std. Predicted Value	−1.226	1.263	.000	1.000	6
Std. Residual	−1.701	.757	.000	.894	6



7. Interpretation

For calculating regression, we have taken FDI as independent variable and GDP as dependent variable. A Regression "r" of 0.727 signifies that about 72% variation in our dependent variable, i.e., GDP of India is caused by change in independent variable, i.e., FDI. Further "r[2]" or square of value of 0.528 denotes that about 53% total change in GDP is explained by change in FDI.

In Anova Table, sig value (significance) of 0.102 denotes that the data fits well at 5% level of significance, i.e., it shows that the study stands 95% true.

8. Correlation

Descriptive Statistics			
	Mean	Std. Deviation	N
FDI	32666.5000	8357.47062	6
GDP	208540.3333	23584.68847	6

Correlations			
		FDI	GDP
FDI	Pearson Correlation	1	0.727
	Sig. (2-tailed)		0.102
	Sum of Squares and Cross-products	349236575.500	716215168.000
	Covariance	69847315.100	143243033.600
	N	6	6

Correlations			
		FDI	GDP
GDP	Pearson Correlation	0.768	1
	Sig. (2-tailed)	0.102	
	Sum of Squares and Cross-products	716215168.000	2781187651.333
	Covariance	143243033.600	556237530.267
	N	6	6

9. Interpretation

For calculating Karl Pearson's correlation, we have taken FDI as independent variable and GDP as dependent variable. Karl Pearson's correlation coefficient of 0.768 implies that both the variables move in one direction, i.e., as FDI increases GDP follows. However, lag between the moments is beyond the scope of presentation. There exists high degree of correlation between the independent and dependent variable. In 77% of cases, the GDP moves in the same direction as of FDI. So hereby we conclude, with the help of above calculation that there is a positive correlation between the dependent and the independent variable.

10. Current Outlook of FDI in India

Apart from being a catalyst for economic growth and development, FDI is a major source of non debt financing that enables foreign entities an opportunity to control and own Indian companies. Ever since the Indian economy has globalised and opened itself to the world, many big multinational corporations have outsourced their operations to India so as to avail cheaper costs of productions, lower wages for skilled labour and certain special privileges such as tax exemptions. The country in return acquires the technical knowledge and better technology for efficient production thus creating employment.

11. Market Size

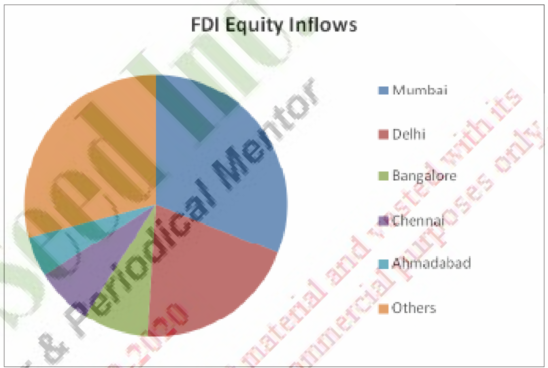
According to the reports given by Department of Industrial Policy and Promotion in 2017, the FDI in India stood at $33.75 billion for the period of 6 months (April – September) indicating that the government's efforts to attract foreign capital through relaxation in FDI norms and improvement in ease of doing business is yielding results. During this period telecommunications industry attracted the highest FDI of $6.08 billion in terms of equity inflow which was followed by Information Technology where an investment of $3.05 billion was made.

Some recent significant announcements for foreign direct investments in the previous year (2017–18) are as follows:

- 15 Japanese companies have signed MOUs showing an interest to invest in the state of Gujarat.
- Engie SA, a france based energy firm and Abraaj group from Dubai have entered into a partnership for developing wind power platform in the country.
- Walmart, the largest international retailer is planning to establish thirty brand new stores in India over the next 03 years through its Indian subsidiary, Walmart India Ltd.
- Amazon has further invested about "$1 billion in its Indian subsidiary so far making its total investment to $2.7 billion".
- Tamasek, a state owned holding company owned by the government of Singapore will make a purchase of roughly 1000 crore in Manipal hospitals, a private health care network running a chain of hospitals in India.
- "International Finance Corporation (IFC) has planned to invest $6 billion in several sustainable and renewable energy programmes in India".
- SAIC Motor Corporation has set up a completely owned car engineering facility in India and plans to begin production by 2019.
- The government's make in India programme has been successful in attracting investments and is evident from the inflow of $1.54 billion (for the period of 2014–2017) since BJP resumed control.
- CleanMax Solar, a rooftop solar development firm based in Mumbai has received a $100 million investment from "Warburg Pincus (a private equity firm in New York) which will provide opportunities to globalise its products".
- "The FDI proposals from Oppo Mobiles India, Chumbak Designs, Daniel Wellington AB and other corporate have been approved by the Government of India".

List of Top 5 FDI receiving States of India in terms of Equity Inflows.

State	FDI Equity Inflows (2016–17)	Percentage of Total Inflows
Mumbai	1,31,980	31%
Delhi	39,482	20%
Bangalore	14,830	8%
Chennai	14,300	7%
Ahmadabad	12,950	5%
Others	1,23,465	29%



We can observe from the above figure that Mumbai attracts the maximum FDI in terms of Equity Inflow followed by Delhi. The investment opportunities are diverse and attractive in these two cities being the financial and political capital of the country.

12. Government Attitude

The Bhartiya Janta Party assumed control of the government in November 2014, electing Mr. Narendra Modi as the Prime minister of the country. Since then government has laid heavy emphasis on industrialization and development of MSME sector. The government has launched several policies and schemes to boost the morale of small scale producers and entrepreneurs, as it believes that self dependence for producing a product rather than importing the same from another country could be a key factor in economic development and increasing the GDP of the country. Moreover the government has laid heavy emphasis on increasing exports with the objective to offset infrastructural inefficiencies and associated costs involved. Apart from this, "Start Up India" is an initiative taken by the government to promote the entrepreneurial spirit among the youth to generate sustainable economic growth and large scale employment opportunities.

However Nirmala Sitharaman, the commerce and industry minister proclaimed that, "the Government had decided not to extend the deadline of April 1 for expiry of all existing Bilateral Investment Promotion and Protection Agreements (BIPA) or the Bilateral Investment Treaty (BIT). This essentially means investments from countries that have failed to sign a revised BIPA with India, based on the new text that was approved by the Cabinet in December 2015, will not be legally protected. This will dent India's image of being a preferred investment destination."

Leading countries of the world like U.S have raised questions on some provisions of this new Bilateral Investment Treaty. Some provisions in the new treaty also bar foreign investors from approaching international arbitration.

Instead it has made it obligatory to first reach out to the domestic courts in case of disputes. The government has removed the "most favoured nation" clause which is a vital aspect of any BIT.

13. Recent Initiatives Taken by Government

- "Strengthening single window clearance system for faster approval of proposals in order to improve the efficiency of transactions in India".
- Ease of approval mechanism for FDI by removing the approval of Department of Revenue that was required earlier and mandating clearance of proposal within 10 weeks after receiving applications.
- "Department of Industrial Policy and Promotion (DIPP) approved nine FDIs worth INR. 5000 Crore".
- Infrastructure Development in north eastern states undertaken by Japan to develop strategic infrastructure projects.
- "Foreign Direct Investment in Defence sector under automatic route to be raised from 49% to 51% in order to boost Make in India initiative and generate employment".
- "Central Board of Direct Taxes has exempted income generated from Employee Stock Options, FDI and certain other transactions from Long Term Capital Gains".
- "Allowing 100 percent FDI in Cash and ATM management companies".
- The GOI is planning to scrap the Foreign Investment Promotion Board (FIPB) so as to improve the ease of doing business.

14. Conclusion

There is no doubt that FDI continues to play a noteworthy role in the Indian Economy. From the above calculations, the scrutiny shows that there exists a affirmative relationship between FDI and economic growth. It is evident from the fact that the relationship is found positive and these findings have important implication in policy making. These findings have significant policy implication where the government has to consider the prominence of FDI contribution to the growth of the economy as a whole.

Economic Development of any economy can be achieved by encouraging and attracting increased Direct Investment from foreign bodies which can help to create better employment opportunities in the country. Apart from this advanced technology which comes through process and technology sharing in production will train more workforce therefore it will improve the productivity and the level of contentment and demand from the customers. But we should also consider the negative effect on domestic producer because they are trailing behind in terms of market share, since the foreign investor tends to acquire the controlling position in the market. This incidentally leads to the domestic producer fronting difficulties of survival in the marketplace as in the long run foreign companies usually attain economies of scale with the improved process and technology. India is among the one of the leading countries that attracts the highest FDI inflows and has become an emerging market for multinational corporations. According to a report published by World Bank, FDI in India has an expected growth quotient of 8.8% in FY 2018–2019 and will improve India's GDP in the future. The Growth Trajectory is expected to continue its uphill climb.

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Annexure-I

FDI in India - The Growth Trajectory

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Impact of Liberalization and Globalization on Trade Unions in India

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Abstract

Prior to 1991 economic reforms in India, the trade unions in the Indian industry exhibited a domineering stance. There were frequent labour strikes, often triggered, supported and sustained by political factors.

Post-reforms, the pressures of liberalization, privatization and globalization forced the central and state governments to support the capitalist class which adopted various cost-reduction and profit-maximization measures. The adoption of these measures led to fragmentation of labour movement and increased the helplessness of the unions. Even the trade unions in the public sector experienced worsening of their position. However, the absence of strong unions has been creating problems for the capitalist as well as for the workers. Hence it has become important to revive the status of trade unions. However, the trade union initiatives for revival should be in consonance with the new market driven business environment and should focus on making positive contribution in business growth rather than playing an antagonistic role. On employee front, trade unions have to ensure education, skill enhancement, and professionalization of employees to prepare them for meeting the challenges posed by the LPG model.

Keywords: Labour Reforms, Liberalization, Privatization, Globalization (LPG) Model, Public Sector, Trade Unions, NGOs

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Editorial Board Excerpt: Editorial board are in suitable passageway responsible for the supremacy of the critique and cautious for recognize noteworthy 'worth mentioning topics', sourcing high quality manuscripts, handling schedule paperwork, and organizing the flow of manuscripts (i.e. from author to referees and back in a camera ready shape). The two most outcome mentioning attributes of any article suitable for GjEiS are (1) having a wide-ranging acquaintance of the subject area and (2) being organized. Depending on the dimension of the composition and its argument potency, the number of editors can range from one or two people to many more and sometimes to bring articulateness the blind reviewer process enabled to bestow with wide-ranging justice to time-honored editorial. Initially at the Time of Submission (ToS) submitted paper had a 10% plagiarism which is an accepted percentage for publication. The editorial board is of a surveillance that manuscript had a successive close watch by the blind reviewer's which at a later stages had been rectified and amended by a co-authors (Jit, Bharti and Rajeev) in various phases as and when necessary to do so. The reviewer's had in a first round customary in a minuscule span restructured by authors. The comments related to this text are extremely detectable related estimating the trade unions in India both subject-wise and research well thought-out by the reviewers during evaluation and further at blind review process too. All the comments had been collective at an array of dates by the co-authors' in due course of juncture and same had been incorporated by the authors in accumulation. By and large all the editorial and reviewer's comments had been en suite in a paper at the end and further the script had been mark down and decisive under **"View Point"** group as its things to see and illustrate consideration to the effort in relation to Liberalization and Globalization on Trade Unions in India

1. Introduction

Trade Unionism is over a century old in India. It performed significant economic, social and political functions and made an important place for itself in the Indian industry. The evolution of Indian trade unionism has been intertwined with India's freedom struggle. There was a constructive interface between trade union movement and politics as both needed each other. Unions provided a large political base for freedom struggle and political support helped trade unions attain recognition as legal representatives of labour class especially the organized labour.

*Author for correspondence

During the post-independence period also, trade unions relied heavily on state intervention to frame the rules for 'industrial relations system' and for defining the role of the unions. The 'social compact' between the state and the unions involved exchanges: the unions' promise to accept wage restraint and maintain industrial peace was rewarded by the state by creating substantive and procedural rights for the unions. This led to the regulation of the unions and institutionalization of industrial conflict. The role of the trade unions was codified and defined as instruments of collective bargaining on behalf of labour class. The state created tripartite structure of consultation such as Indian Labour Conference, central industrial relations machinery, wage boards, joint management councils etc. The state's intention was to reduce areas of conflict by facilitating dialogue and averting strikes. If dialogue failed, the government used the instrument of compulsory adjudication wherein state and national level tribunals were appointed to address the issues. The period was marked by a social cohesion between the trade unions and the state. The unions felt empowered to voice their concerns and to protect and promote the interests of labour.

The employers, however, were wary of giving too much importance to the workers. They were not consulting and involving the workers while addressing the substantive and procedural issues. This led to disgruntlement and unrest among labour. Gradually the labour unrest turned into labour militancy. From 1960 onwards, India saw many labour strikes. For many years these strikes were triggered, supported and sustained by political factors. However, political unionism failed to deliver tangible and quick results. This resulted in gradual emergence of independent, decentralized and non-political unions in place of centralised and political unions, even though weaning away from political parties was not very easy for the unions.

The state also realized that its interventionist system was failing to achieve the objective of industrial peace, so it gradually started reducing its interventionist role. As a result of reducing state support for unions, labour militancy lost its vigour and gradually started waning. Employers made use of this opportunity and their offensive in the form of lockouts, retrenchments etc, began to rise since mid-1980s.

2. Liberalization and Globalization as a Challenge for Trade Unions

The ascent of Rajiv Gandhi on the Indian political scene was accompanied by his vision of liberal Indian economy. The economic reforms process initiated by him gained momentum in 1991 and finally culminated into Liberalization, Privatization, Globalization (LPG) model of development. The LPG model was already established in several countries world over so India could not encapsulate itself from the process for long. Once India adopted this model of development the concomitant effects and pressures ensued. There were intensified competitive pressures in product markets, increased segmentation of labour markets and greater mobility of capital. The highly competitive environment witnessed rising individualism and increasingly differentiated work-force resulting in weakened commitment towards trade unions. Increased customer awareness dramatically changed public perception towards trade unions, particularly when the unions opposed pro-customer changes. Globalization, market forces and severe competitiveness in terms of price, quality, and customer focus further reduced the role of unions.

Privatization and liberalization that closely succeeded the process of globalization gradually reduced the role of public sector – the main stay of trade unions. The government and political parties were not able to support either the redundant manpower or the concept of protected economies. Lack of political or governmental support further weakened the status of unions. At the same time, global institutions like the World Bank, IMF and WTO were pressurizing the nation states to rationalize their labour laws and undermine the rights of trade unions to facilitate the functioning of MNCs. This overall anti-trade union trend gave a bargaining advantage to the capitalist *viz-a-viz* unions and the market logic forced the state to relent to the capitalist.

3. Demand for Labour Reforms in India

After introduction of LPG model of development in India, the capitalist class started demanding the implementation of neo-liberal reform agenda which included outlawing strikes, weakening union power, individualizing labour relations, diluting labour laws, privatizing public enterprises, freedom to hire and fire workers, enabling laws to introduce technological changes, closing undertakings, removal of law regarding prohibition of contract labour and repealing of legal provisions. The employers argued that these measures will help them to reduce costs and get a competitive advantage. Trade unions had already become apprehensive about the deleterious impact of introducing neo-liberal policies and technological changes. They opposed and boycotted the implementation of various neo-liberal measures announced by the government (Mamkottam, 2000).The strong resistance from trade unions thus obstructed any amendment in section V Bof the Industrial Dispute Act. But in practice, the state only winked at downsizing of labour force or the increasing percentage of contract workers. As indicated by the data of Annual Survey of Industries, the proportion of contract workers increased from 19.7 per cent in 1999-00 to 34.6 per cent in 2011-12. 95.93 per cent of these contract workers are in the private sector. As things stand today the wage share of the organized sector is only 10 per cent while that of the unorganized sector is 90 per cent.

Encouraged by reduced state intervention as well as tacit state approval for market-based economy the employers used various methods to reduce the size of the labour force and weaken the trade unions. These methods were:

- Decentralization of production.
- Shift of production to non-union areas.
- Downsizing or sub-contracting various operations.
- Replacement of regular workers by part time and contract workers to cut wage costs.
- Lockouts to retrench workers.
- Prolonged lockouts as instruments to pressurize labour to accept humiliating conditions of work.
- Use of voluntary or coercive methods to reduce employment.
- Automating certain tasks and functions.
- Employing smaller work forces with diverse, multiple skills.

These measures led to further fragmentation of labour movement and increased the helplessness of unions. They also helped the employers to reduce costs and earn handsome profits. However, no benefit of these profits reached the labour. The capitalist class appropriated all the benefits of growth at the cost of labour class.

4. Reduction of Employment in Public Sector

With the increasing pressure of market forces the state also redefined its labour market and industrial relation policies in public sector. It adopted various methods like freeze on recruitment, longer periods of wage agreement, voluntary retirement schemes for dishoarding surplus workers, rolling up labour welfare schemes etc. Privatization of public sector undertakings by instruments of disinvestment, deregulation and downsizing etc. resulted in a decline in employment, reduction in wages, worsening of working conditions, dilution of collective bargaining etc.

Post-liberalization many states also were quite liberal in proceeding with labour reforms. The labour department of Government of Maharashtra liberally gave permission for closure of factories. Similarly, to provide labour flexibility to employers, the Government of Andhra Pradesh willingly deregulated various provisions of Contract Labour (Regulation and Prohibition) Act.

Weakening political support along with other factors such as rise of independent enterprise unions, unpopularity of unions due to media campaign against militancy of unions, shift from collectivism to individualism amongst educated workforce, trend towards non-unionism etc have been leading to decline in effectiveness of unions. But this is not exactly what the employers wanted.

According to Rao and Patwardhan (2000) majority of employers prefer unionism over non-unionism. Management prefers to have effective and stable unions when unions show inclination towards productive efficiency and advancement of technology (Virmani, 2000). Rao and Patwardhan (2000) have suggested that strong trade unions can ensure accountability and enforcement of contracts. Using good offices of unions, the employers can sell the concepts of quality and productivity to the workers.

In view of employers' preference for unionism over non-unionism and the employees' requirement for a strong union to save their interests, it will be appropriate to have strong trade unions. However, trade unions have to reorient themselves to the LPG induced business scenario. The declining importance of trade unionism can be reversed if trade unions make sincere efforts to revive their status.

5. Important Initiatives for Effecting Change

- Jose (2000) suggests that unions need to secure a niche as effective and efficient providers of services to their members. Venkataratnam (1996) reported that post-reform, unions have been able to successfully bargain and get some employee friendly clauses included in work agreements. Some of these clauses are: giving permission to pregnant women to refuse to work on computer terminals, linking allowances such as children's education and house rent to employees' attendance, voluntary retirement scheme for contract labour and so on.
- Trade unions can also redefine their role by focusing on non-bargainable activities like employee welfare, health, education, social security, gender equality in employment, skill enhancement, recreation and legal assistance etc.
- Trade unions have, by and large, opposed the neo-liberal policies following economic reforms. Nation-wide strikes, bandhs and rallies were organized in different parts of the country. The protests of trade unions did not go well with the aspirations of the government, the industry and the growing middle class to have a new, vibrant and developed India. These protests have been seen as unnecessary and unreasonable. Trade unions have to understand that they cannot wish away globalization. Opposing globalization or using traditional reactive means of protests will not help the working class. Trade unions have to improve their image from reactive agents, power mongers, antagonists of modernization and development and proponents of traditionalism to partners in the growth of the company. Trade unions can sell the concept of productivity, quality, need for advanced technology, accountability etc. to the vast mass of workers and motivate

them to make their optimum contribution to the organization. This will not only enhance the unions' say in the tripartite consultations but also earn respect for the unions among the employers. Using participative approach instead of antagonistic approach will assign more power to unions in organizational decision making.

- Along with their focus on workers in organized sector trade unions should exercise increased focus on the inclusion of workers in unorganized sectors. Anant and Sundram (1998) reported that unlike the formal sector "the unorganized sector has little by way of protective legislation or union representation". Detailed surveys in various industries have found that the existing trade unions do not sufficiently represent the interests of temporary and casual workers (Davala, 1992), especially in labour-intensive industries/older industrial sectors. To increase their acceptability among workers, trade unions need to create an image that they can act on behalf of all employees, whether unionised or not.
- The unions show more sensitivity to the plight of contract/temporary or casual workers in the newer industries. In these industries unions are organized on the enterprise/plant level. These unions provide opportunities to all workers to express and realize their aspirations through unions and have greater control over the unions. This has enhanced the popularity of plant level unions in the newer industries at the cost of regional or central level unions. However, these decentralized enterprise level unions have been sometimes facing considerable employee resistance in generating firm wide agreements. Ever since introduction of reforms these unions have been on the defensive as they have been losing most of their members through voluntary retirements or terminations. If both the central and enterprise level unions work in collaboration they could ensure better working conditions for workers in all industries. While the central trade unions can try to extract the maximum for the workers through collective bargaining, the unions at enterprise level can create awareness among workers about the importance of associating with trade unions, thus preventing a shift from collectivism to individualism.
- Trade unions should develop better relationship with the non-governmental organizations working at the grass root level for improving the lot of unorganized, child and women workers. These NGOs have endeavoured to organize (not necessarily unionize) various informal sector occupations and sites but the established trade union federations resent these interventions as an intrusion into their terrain. Cooperation between NGOs and trade unions could level up working conditions of workers working in this relatively neglected sector. Developing strategic alliances with community bodies, urban and social movements, and environmental groups will also enhance the effectiveness of trade unions.
- The trade unions also need to focus on inclusion of women workers in their fold. Deshpande and Deshpande (1992, 1998) have reported that both male and female employment/participation rates increased after liberalization. However, women workers increasingly took to self-employment and to the informal sector. A large section of Indian women workers is engaged as 'home workers' in several industries. The Self-Employed Women's Association (SEWA) took a lead in drafting an ILO convention on home workers (Mukul, 1998) but failed to get a bill passed in the upper house of the Indian Parliament which would have equalized home workers with other wage earners in terms of health and safety, remuneration, minimum wages and maternity benefits. Even though SEWA has a large membership and is a genuine trade union, being unrecognized, it faced a great difficulty in having a status at National Centre for Labour. The CITU is the only trade union at central level which has tried to organize women workers in the informal sector. It should be a joint effort of all national level trade unions to enrol more and more women workers in formal and informal sectors to increase the number of women in leadership roles within their established set up.
- Instead of seeing liberalization as a hurdle to the growth of trade unionism, it can be seen as an opportunity for development of business. Trade unions can adapt their structure to meet the demands of the competition (Venkataratnam, 1996). Competition in business has forced the capitalist to adopt various measures to cut costs and increase productivity. The heat of competitive business has been felt by public sector units also. Post-reform government as attempted to tie unit level wage increases to productivity increases. Most of the loss-making PSUs were disinvested or privatized. Micro-economic requirement of productivity growth as well as increased competition makes it crucial for trade unions to restructure themselves. Globalization has thrown open global production chains and new forms of organizational structure which is decentralized as well as globally networked. Unions have to adapt their organization to these emerging structural trends. Moreover, unions are supposed to opt for centralization through union mergers at national or international level on the one hand, and decentralization, particularly at the enterprise level, on the other hand. Unions should also bring about a change in their strategy to meet the challenges posed by prevailing economic and social scenario buttressed by the forces of globalization. Unions' failure to change their strategy will make them vulnerable to manoeuvring by the state and the capitalist class.
- Trade unions can ensure direct participation of all categories of employees and improve relations with all levels and type of employee leaders.

- When capitalist class is working in collusion with the state, the trade unions should also avoid multiplicity and get united at apex level. This will help them meet the offensive of the capitalist class. Till now no efforts have been made to foster this unity. The BMS or INTUC or the left unions like CITU and AITUC have been showing more concern for allegiance to their political parties rather than putting up a joint front. Getting freedom from political parties is the key to strengthening unity amongst unions.
- Getting delinked from affiliated political parties will also establish the credibility of trade unions as representatives of workers rather than being puppets of the political parties. Some examples of such attempts can be found in recent times. INTUC, an affiliate of Congress party, has repeatedly announced its independence from the party and has opposed a number of policies introduced by Congress. Another glaring example of such delinkage was seen when CITU's leader Wazibur Rehaman and INTUC's leader Arif Ali, along with 3000 employees working at the Kanoria Jute Mill left their respective unions and formed Sangrami Shramik Union (SSU).
- Most of the times trade unions restrict themselves to wage-bargaining and safety concerns. Skill upgradation, retraining, professional growth and technological upgradation should also become important issues for trade unions in India. Unions can also create awareness among workers regarding importance of education in the present-day knowledge-based economy. Improved education of workers can lead to improved loyalty towards unions and also improved bargaining position of the union.
- The trade unions should be more professionally managed to face the organized forces of employers and to fight criticism from various quarters. Some attempts in this direction are being made by central trade union organizations by upgrading the quality of their personnel, leadership and the service rendered. In their effort, trade unions are being assisted by National Research Institutes like Maniben, Kara Institute, Ambedkar Institute of Labour Studies and National labour Institute etc. International organizations like Friedrich Ebert Stiftung are also lending a helping hand. The focus is on capacity-building activities that include programmes on management, strategic planning, leadership development, networking, information technology, gender issues and labour laws.

6. Conclusion

The trade union movement in India needs to revive its pre-reform status. Before the introduction of 1991 economic reforms trade unions played a prominent role in Indian industry. Post-reforms, both in public and private sector, trade unions experienced weakening of their position. To meet the pressures generated by liberalization, privatization and globalization the capitalist class introduced various measures for cost reduction and profit maximization which rendered trade unions weak, fragmented and helpless. The government also redefined its labour market and industrial relation policies that resulted in decline in employment, worsening of workers' condition and powerlessness of unions in public sector. However, the weak and powerless unions have been proving to be a bane rather than a boon. The capitalist class needs effective, strong and responsible unions that can ensure productivity, advancement of technology and workers' accountability. Workers also need strong unions to save their interest.

But trade unions will be able to regain their status only if they reorient themselves to the changed demands of the market economy. They have to become partners in the growth of the company; adapt their structure to meet the demands of competition, ensure re-education and retraining of the workers as per needs of the knowledge-based economy and sell the concept of quality, productivity and accountability to vast mass of workers.

To gain a strong foothold amongst workers, and public at large, they have to become, effective service providers, focus more on non-bargaining activities, include vast mass of male and female workers in the unorganized sectors, create awareness among workers about the importance of associating with trade unions and become apolitical. Beyond all these initiatives is the need for professionalizing of trade union movement. The leaders have to be trained in management, strategic planning, leadership development, networking, information technology, gender issues, labour laws etc. Such capacity building will empower the trade unions to meet the challenges posed by the LPG model of development and help them revive their earlier prominence.

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Annexure-I

IMPACT OF LIBERALIZATION AND GLOBALIZATION ON TRADE UNIONS IN INDIA

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Factors Affecting Online Shopping Behaviour

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Abstract

Online shopping has become new sort of retail searching. It's currently been adopted everywhere the planet together with India. For international retailers, India has been attaining significance as a potential moneymaking market place. Indian shoppers have started to understand the advantages of having internet for purchasing goods online, since the latest economic reforms. However, net sales don't reflect the growing range of web users. Thus, in order to understand the way to stimulate the way of on-line shopping behaviour of Indian customers, it's necessary to identify the factors that affect their on-line shopping behaviour. This paper examines the key factors that have an effect on shopping for motives of customers for on-line shopping for or E-searching. The study's objective is to find out the factors that affect Indian consumers' behaviour toward online shopping which can be used as a basis to factually find out the factors affecting the online consumer buying process. Also, it will be good to comprehend the models suggested by the different interested researchers in the relevant area of research.

Keywords: Consumer Attitudes, Consumer Rights, E-Commerce, Online Shopping, Perceived Risks, Shopping Behaviour, Shopping Decision

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1. Introduction

Buying goods online, flexibility to share the e-mail around the clock, connecting and talking using internet anywhere in the world, buying goods online are some of the advantages that internet offers and thus, it has become an integral part of people's daily lives. Also, people uses Internet for various reasons such as: looking for product features, comparing expenses/prices, going through the reviews, selecting products and offerings via Internet, placing the order, making payments, or any different potential which is then observed by delivery of the required merchandise using Internet, or any other remaining means in the business to consumer (B2C) e-commerce cycle activity (Sinha, 2010). Over the years, for the trade of items and services, Internet has been transformed into a large world market place. Also, for commercial enterprise transactions, E-commerce has end up as an irreplaceable advertising and marketing channel. Thus, in B2C transactions, online shops and offerings are vital sales channels.

India has been earning significance as an excessive attainable profitable market for international retailers because of the enhancing economic prerequisites due to liberal financial policy. In 2009, the retail market dimension for India was ranked as the 5th biggest globally, and was once valued at US$400 billion. In spite of wide variety of evidence displaying the boom of usage of Internet by Indian consumers, net income display less than one percent of the entire retail income in India. This might also indicate a huge potential to grow yet a few limitations to triumph over for retailers.

Numerous Indian purchasers have low self-adequacy in utilizing Internet and experience acquiring on-line to be unpredictable. It appears that notwithstanding for those, who utilize Internet on typical bases, Internet is customarily to look item data.
Thus, to perceive the purchasing thought processes in online buying is an unquestionable requirement. In this manner, the goal of this study is to find out the factors influencing Indian shoppers' on line purchasing conduct by means of assessment of the writing in the place of on-line consumer behaviour conduct. This study first provides a theoretical conceptual background on retail present scenario in India, online retail, concept of online shopping behavior, illustrates the differences between offline and online consumer behaviour process, framework of online consumer decision, influences of online shopping decision, different models to find out the variables that drive buyers to choose to purchase or not to purchase through online channel. At long last, we draw administrative ramifications of how online dealers can utilize this information to enhance their online stores to be more appealing and get more online customers.

2. Retail Present Scenario in India

At present the retail venture in India is growing at a faster rate. It is currently not widely surely understood as the manner in which it is in other Asian countries. India is eager to develop to be a most important member in the retail showcase. India not set up for it as it is a developing country. They are also investigating every possibility to rise as the high caliber in retail Industry. India also permits different organizations getting assortment of items concentrated on various customer portions as it has a high on pass way of lifestyle factor.

India positions fifth among the main 30 developing markets for retail per the Retail Development Index 2012. There are numerous components adding to the blast in this division. Some of them are increased consumerism with the capacity to think of the cash for extravagance things. Indeed, even there is an increase in the spending intensity of Indians. Indian's are visiting abroad and they are presented to exceptional societies, their method for living, and their mold and in this way more prominent brands. Overall shops eye the Indian market since in our way of life there is a lot of exchange of gifts for relational unions, celebrations and other crucial occasions. Henceforth, it's basic for people to spend on items as an integral part of life regardless of rank and ideology and budgetary status. As there is no problem to the spending power, cities like Kolkata, Ahmadabad, Chandigarh, Hyderabad, Coimbatore, Pune, Nagpur, Cochinetc has pleasant market for about all item and administration which gives a decent proposition for a producer to enter Indian market

3. Online Retail

The way that world is quickly converting into a natural network because of Internet and diverse correspondence mediums is presently not absolutely true for the Indian setting. While developed and fast growing nations have comprehended the effect of Internet, India is regardless unmindful and making an endeavor to manage up with the innovative advancements. The western way of life has influenced each and every part of our Indian Society. The life is ending up quick now not just in metros anyway but also in the typical urban communities. The wide assortment of independency families is developing and both a couple is working, as they have less time to go to the market for acquiring every single item always.

Some unique intentions like: website guests jams, time deficiency, diverse employments of plastic money, late working hours or more all the approach of web at entryway advance of whosoever wishes it. Online retailers have increased their supplier and purchasers have found it helpful. There is been change in control mode also – moving to Cash On Delivery (COD) from advance payment. Indeed, even if there should arise an occurrence of delivery test is changed. It is preceded onward to helpful conveyance timings at the ease of the customer from steady delivering timings. India has opened the entryways for remote direct subsidizing in retail.

Indian market is commanded by method of chaotic gamers yet there is achievable in the region of retail gamers also. Section of better players, for example, Big Bazaar, More and so on to even in the rural zones is prepared of development in its division. There is been upward bump in the make greater of Indian center order people because of rapid financial development. Despite the fact that the people of the utilization of Internet in India are low in expressions of all around level of entire populace at the same time, in total numbers it is high. This offers full-measure open doors for a significant number web based business sites to connect with this portion. The people approaching in India is the age team from 18–45. Independent of this reality on-line retailing composes a pitiful 0.08% of the whole Indian retail showcases. Market players should be additional positive, changing and spearheading in their approach and conferring to make genuine advances. In the present day, majority of online deals is in a shift of things. The Indian market wants to hop to the following big level.

4. Online Shopping Behaviour

Online shopping is a sort of electronic business that enables buyers to straightforwardly buy from dealer any items or services over the web utilizing internet browser. Web based shopping gives all kinds of merchandise to be accessible in the virtual world. It is much the same as a shop in the area, offering all kind of merchandise yet with some conspicuous contrasts. Also, one can get to these shops whenever without getting out of their working places or homes. It can be gotten to whenever you are moving, unwinding in your home or having a period out at your office. Every one of the items is shown with the cost and itemized say of the highlights. Potential customers can examine them, break down what other comparable internet shopping outlets are putting forth and can receive the best arrangement in return.

Recently, the concept "DIC" i.e. double income couples are becoming all the more prominent in India. With the increased working hours and expanded separations to movement, they do not have enough time to dedicate it to shopping as individuals don't have a craving for going out for purchasing everyday things following an extremely chaotic day at office. They need to hold it for different works like mingling, excitement and so forth. Presently the organizations are concocting the ways so this segment of society can be tapped to the most extreme and best way to draw in them is only a click away and that too whenever 24X7. In addition, this is situated in the virtual world and can be gotten to whenever you are viewing your most loved TV appear or having a respite at office. This is the web based shopping idea.

As the customary shopping conduct, the procedure comprises of five steps (Liang & Lai, 2000). In a customary web based shopping process, when potential buyers recognize a requirement for any item or service, they peruse the Internet and scan for require related data. As opposed to currently looking for items, now and again shoppers are pulled in by data about items or services related with the felt need. They at that point assess choices and pick the one that best fits their criteria for meeting the need felt. At last, an exchange is led and post-deals services are given. According to Li and Zhang, 2002, web based shopping attitude alludes to psychological condition of customers for making buys on the Internet.

5. Offline and Online Consumer Decision-Making Process

The system of making choice is fundamentally the same as regardless of whether the buyer is making the purchase offline or on the web. Yet, one some critical contrasts are purchasing condition and promoting correspondence. As per conventional purchase model, Consumer buy selection by and large begins with need/requirement mindfulness, searching for information, offerings assessments, finding out what to purchase lastly, post-buying conduct.

At the point when consumers see advertisements or on line commercials, these plugs may also interest to consumers' consideration and fortify their intriguing exact items. Before they decide to buy, they will require additional certainties to enable them to purchase a certain item or service. According to Laudon and Traver, 2009, In the event that they don't have enough data, they will look through on line channels, e.g., web search tools or indexes, sites. At the point when customers have abundant data, they should assess those choices of goods or services. In the inquiry stage, they may search for the item surveys or customers remarks. They will find out which gives them the fantastic fit to their desire. According to Koo et al., 2008, amid this stage, efficient page structure and the engaging arrangement are vital things to induce buyers to be keen on purchasing item and transporter. The most advantageous feature of web is that it bolsters the pre-buy step (Maignan and Lukas, 1997) as it enables customers to assess diverse inclinations and preferences (Dickson, 2000). Amid the obtaining stage, item combination and deal contributions seem, by all accounts, to be the most vital factor to help customers choose what item they should choose, or what vender they should purchase from (Koo et al., 2008). Post-buy behviour will end up more noteworthy after they buy on line. Shoppers sometimes have an inconvenience or issue about the item, or they would perhaps want to return or change the item that they have purchased. Therefore, it becomes important at this stage.

Each of the 5 stages mentioned above are influenced by methods for external variables of trusts and risk (Comegys et al., 2009). The on-line shopping behaviour biggest giant is the search procedure (Seock & Norton, 2007). The source risk comes in the phase of information pursuit and comparison because of the reality the certainties in the web sites may incorporate a few errors. Some sites expect customers to enlist sooner than looking through their site. Thusly, notwithstanding product risk, customers moreover also face the risk of statistics security (Comegys et al., 2009; Wang et al., 2005). Due to the idea of on line buying, customers take the risk as they are no longer in a situation to watch the item before obtaining. Security bother does not end at the purchase arrange anyway proceeds to the post-buy organize on the grounds that their non-open information may not be used in a right way.

6. A Framework of Online Consumer Decision

Laudon and Traver (2009) developed a system that contrasts on line customer choice and offline decision making and recommended that an incessant buyer conduct framework requires some adjustment to consider new factors. At the point when consumers want to purchase item, they will look at the brand and the characteristics of item or services. A few items can be acquired and delivered without issues on-line, for example, programming, and books. However, a few items are hard to decide by means of on line channel. Website highlight is one of the critical issues that can affect buyers to buy item on the web. For instance, on line shops can utilize high innovative know-how to improve their sites with a specific end goal to affect benefactor view of the web condition (Prasad & Aryasri, 2009). If the site page is moderate, not safe, or not sufficiently sheltered, it will have negative effect on purchaser readiness to endeavor or purchase items from the site. Purchaser ride with purchasing on the web (Broekhuizen & Huizingh, 2009) or buyer abilities, that allude to the clients' learning about the item, and how web based acquiring works (Laudon & Traver, 2009) also impacts on line purchasing practices. Clickstream conduct is another part that will turn out to be more imperative in the online world. It alludes to the conduct that buyers look for information through web sites numerous sites in a similar time, at that point to a solitary page, and at some point or another to a determination to buy (Laudon & Traver, 2009). Every one of these components prompt exact behaviour and attitude about on-line purchasing and a vibe that they can control their buying surroundings by means of the online world.

7. Online Buying Decision - Influences

7.1 Inspirations that Lead Consumers to Buy on the Web

There are numerous thought processes why people shop on the web. For instance, consumers can get something at each time other than setting off to the store; they can find the similar item at a lesser price through contrasting exceptional sites at the same time; they some time or another avoid pressure while having an up close and personal transaction with business people; they can avoid in store road turned parking lot, and so forth. These components can be abridged into four classifications – comfort or convenience, data or information, close by items and services, and charge or fee and time effectiveness.

7.1.1 Convenience

Experimental research demonstrates that convenient of the web is one of the effects on shoppers' readiness to buy on-line (Wang et al., 2005). Web based shopping is accessible for customers all day and all night contrasting with regular shop as it is open 24 hours per day, 7 days (Hofacker, 2001; Wang et al., 2005). Research shows that fifty eight percent chose to save money on line since they could keep some additional hours when the run of the mill shops are shut and 61 level of the respondents shopped online because of the reality they support to not waiting in long queues and crowded places, specifically in occasion purchasing (The Tech Faq, 2008). Buyers no longer search for items, anyway also for online services. A few companies have on-line benefactor benefits available 24 hours. In this way, buyers can make inquiries, get basic help or help even after business hours that had outfitted accommodation to customers (Hermes, 2000). A few clients utilize online channels just to skip from vis-à-vis collaboration with sales representative since they are not happy when managing sales representatives and don't want to be controlled and overseen in the market (Goldsmith and Flynn, 2005; Parks, 2008). This is particularly appropriate for these clients who may likewise have had terrible ride with the sales representative, or they simply want to be free and settle on decision independent from anyone else without salespersons' essence.

7.1.2 Information

The web has made the insights gaining admittance to simpler. Given clients seldom have a danger to contact and feel item and bearer on line before they settle on choice, online venders as a rule supply additional item data that customers can utilize when making a purchase (Lim and Dubinsky, 2004). Consumers put the weight on the information that meets their certainties needs. Also, to get data from its site, purchasers can likewise pick up from items' review through different consumers. They can ponder these conclusions sooner than they settle on a choice.

7.1.3 Available Products and Services

Web based business has made an exchange less troublesome than it was and on-line shops give consumers benefits by method for providing more scope of items and services that they can select from (Lim and Dubinsky, 2004; Prasad and Aryasri, 2009). Shoppers can find a wide range of items which would potentially be accessible exclusively on-line from everywhere throughout the world. Most organizations have their own one of a kind sites to give items or services on the web, regardless of whether they as of now have their front spare or not. Numerous regular shops offer beyond any doubt stock exclusively accessible online to lessen their retailing costs or to offer clients with more picks of sizes, hues, or highlights. Besides, web based purchasing also offers right prices (Amin, 2009) and alternatives for clients. Clients can choose their expense date and sum in their own inclination and ease.

7.1.4 Cost and Time Efficiency

Since internet purchasing customers are frequently given a superior arrangement, they can get the indistinguishable item as they buy at a lower charge (Rox, 2007). As online stores furnish customers with assortment of items and services, it gives customers more prominent opportunities to look at prices from phenomenal sites and discover the items with lesser costs than purchasing from offline retailing stores (Lim & Dubinsky, 2004). Also, on the conviction that on-line shopping should be possible any here and whenever, it make customers' life simpler in light of the fact that they don't need to stall out in the rush hour gridlock, discover parking space, hold up in checkout lines or be in jam in keep (Childers et al., 2001). Thusly, clients habitually find shop from the website that is putting forth comfort and can limit their psychological charges (Prasad & Aryasri, 2009).

8. Models to Identify Factors Affecting Online Shopping Behaviour

8.1 Model 1: Online Shopping and its Effect on Consumer Behaviour by Fayu Zheng, 2006

The University of Nottingham Mayer, Davis and Schoorman (1995) defined trust as, "the willingness of a person to be inclined to the movements of any other person based on the expectation that the different will function a precise action essential to the trustor, irrespective of the capacity to monitor or manage that other party" (p.712) (Cheung & Lee, 2006). This definition is broadly recognized and the most regularly stated (Rousseau, Sitkin, Burt, & Camerer, 1998). People buy products and offerings are the mostly based on their degree of have faith in the product or services, and dealers both in the physical keep or on-line shops. For constructing customer relationship, primary element is the online trust. A current research demonstrates that on line trust is lower than the eye to eye connections in the physical store (Cassell & Bickmore, 2000), and the final product from Cheung and Lee (2006) recommends that dependability of Internet specialist co-op and outer environment have extraordinary effect on purchaser believe in Internet purchasing (Figure 1). The trustworthiness of E-commerce net web site is relying on the how a lot privacy protection and security can be provided. For example, a enormously technical competence can be a thing to affect the trustworthiness (Singh & Sirdeshmukh, 2000). If the web based business web site can give the insights about their client services, region of the workplace, and an assistance catch on the site, clients could additionally make bigger their trustiness as they can experience that the on-line outlets is actually exist (Lohse & Spiller, 1998).

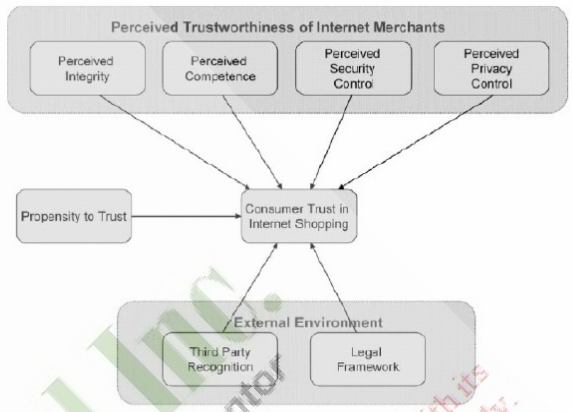


Figure: An Integrative Model of Consumer Trust in Internet Shopping.

Figure 1. An integrative model of consumer trust in Internet shopping.

In summary, the Internet offers a different way to do business and gives sparkling buying trip to customers. So far, there are many rules and conventions need to be expanded to in shape the on line environment. For instance, the safety should be ensured that the transactions on the Internet are safe; the privacy and security must be included by the web sites; and they have confidence transference applications are needed to help engender purchaser trust in the Internet purchasing environment.

8.2 Model 2 - Determinants of Consumer Behaviour Fore-Commerce Environment by Byxiang Xue, B.A. Nankai University, 1999

According to Li and Zhang's (2002) taxonomy that developed based totally on their analysis, there are ten impacts of relevant elements on on-line consumer behaviours. These ten factors can be categorised into five unbiased variables and five established variables. The unbiased variables would be personal characteristics, demographics, features, external environment, and net web site quality). The established variables will be (on line shopping attitude, intention, choice making, on line purchasing, and buyer satisfaction). The five unbiased variables are identified as antecedents, which immediately determine attitudes toward on line shopping. The merchant/item/service characteristics and website satisfaction quickly affect on benefactor fulfillment in the antecedents. This proposes that the antecedent's attitude, decision making, intention and on-line purchasing are collection of processing stage. Consumer pride is separated and takes place amongst at all viable tiers depending on the consumer's involvement throughout the Internet purchasing process, and this two approaches relationship ought to have an effect on each reciprocally.

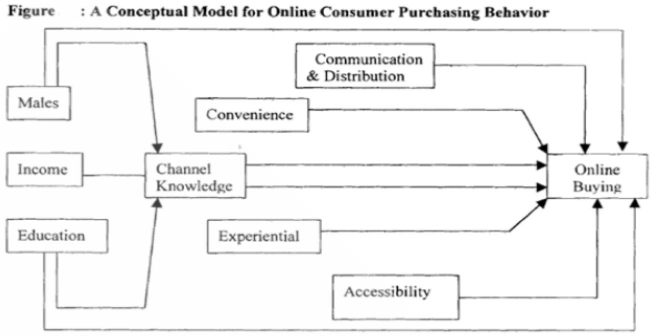
Figure: Research Model of Consumers' Online Shopping Attitudes and Behaviours

Figure 2. Research model of consumers' online shopping attitudes and behaviours.

8.3 Model 3 - Consumer Behaviour in an E-Commerce Environment

Li et al. (1999) attempted to identify the factors that should be used to predict a customer's on-line buying behaviour via testing a linear regression model. Their data have been collected by means of Click in Research employer from an online survey of country wide Internet users. The data had been then cross-validated with different similar country wide surveys (i.e., Greenfield Online) before being used to take a look at the model. Ten hypotheses which are related to advertising channels, purchasing orientations, and consumer demographics are put forward before introducing the model. These hypotheses can be divided into three parts. For the channel principle part, researchers tried to figure out whether online purchasers discover the Internet gives higher channel utilities and consider themselves greater knowledgeable about the Web as a channel than non-purchasers. The distinction is examined for common consumers vs. occasional purchasers. For the purchasing orientation part, which quantified customers' life-style factors, they tried to prove that on-line customers are greater convenient-oriented, much less experiential-oriented, and indifferent to pastime and price orientation. Whether comparable scenario applies to commonplace purchasers and occasional clients is additionally to be tested. For the demographic part, they tried to exhibit that on line consumers are better educated and with greater earnings than non-purchasers. Age differences are assumed to be insignificant among three sorts of on-line buying reputation as part of the hypothesis. A conceptual framework that gives a better perception on elements that affect on-line purchase behaviour and also a summarization of all the hypotheses is proven in Figure 3.

Figure : A Conceptual Model for Online Consumer Purchasing Behavior



(Source: Li, *et al.*, 1999)

Figure 3. A conceptual model for online consumer purchasing behaviour.

8.4 Model 4 -FFF Model – Vinay Kumar and Ujwala Dange

The FFF model, a model of factors, filtering factors and filtered shopping behaviour, portrays the components which affect and urge the shopper to buy items and contributions on the web, that are the mixes of internal and external elements. The external elements are not responsible for the buyer but rather the internal elements are the components of individual (human) characteristics, brain research projects or practices. After the first step, the consumer faces positive hurdles, named in the model as, filtering elements. Getting via the filtering elements the subtle buying causes evolves. After this refined buying behaviour (motives), the purchaser goes ahead and shops online.

8.5 Factors (External and Internal) Affecting Consumer Buying Behaviour

The influences on consumer behaviour are often made between external and internal factors. External elements are come from the environmental conditions, and internal elements are commonly from the consumer's mind. There are many factors that could have an impact on consumer's behaviours. According to Warner, the exterior influences can be divided into 5 sectors: technology and public policy, socio-economics, demographics, subculture, culture, marketing and reference groups. The internal influences are variety of psychological processes, which encompass attitudes, learning, perception, motivation, self-image, and semiotics (Malcolm). In addition to these, Sheth (1983) additionally cautioned that the shoppers have two sorts of motives while shopping, which are practical and non-functional. The practical factors are in the main about the time, shopping region and consumer's needs, which should be like one-stop shopping to keep time, the environmental of purchasing location such as free parking place, lower fee of products and on hand to select from extensively vary of products. The non-functional factors are extra related with lifestyle or social values, such as the brand identity of the store.

8.6 Filtering Elements

8.6.1 Online Security, Privacy, Trust and Trustworthiness

Compare with the in-store shopping, the internet purchasing has a lot of dangers throughout the buying process. As online shopping is one of the non-store formats of shopping, others such as mail order (Spence, 1970), phone purchasing (Cox & Rich, 1964), catalogue (Reynolds, 1974) and so on, which have proved by using recent research shown that customers discover a greater stage of risk. Even though the web affords many practical advantages, however it still have some disadvantages, such as in the sections of security, privacy, believe and trustworthiness.

8.6.2 Security

Due to the characteristics of internet, the data across the internet should be lost or stolen quite easily, in particular the customer's personal records and financial details. In B2C E-commerce area, there are many internet retailers are offering third-party privateness and protection, such as encryption and password protections. The net retailers like TRUSTe grant a third-party verification software for their customers, as soon as a Internet retailer joining the program, there will be a seal offered through TRUSTe suggests that their commitment to security. Therefore, because of the third party verification, the customers regarded this seal could make them more confident to grant their information to the site. Even some websites have secured licensed by using expert organisation, however nevertheless have some clients misplaced their money through web each year. These economic dangers are typically precipitated with the aid of customers themselves. The reasons ought to be widely, some customers have obvious feel of the usage of deposit card on line in the insecurity way, such as public deposit card important points to unknown people or website, go away credit score card in the public place where different human beings can without problems reach, and web buying on the pc with virus. In the Maignan and Lukas's research (1997) shows that the economic dangers have been noted as a foremost cause to cease internet shopping, and protection has come to be a essential subject both in online transaction relationships (Rowley, 1999). The safety treats can be made thru the network and data transaction, and additionally through unauthorized use. Thus, the Internet shops have accountability to preserve monetary and personal important points of customer's security at some stage in the process of on-line shopping. To enhance the effectiveness of the Internet shopping surroundings should gain both dealers and buyers and make a whole lot convince to the customers.

8.6.3 Privacy

Another kind of hazard that purchaser will faced is psychological risk, such as disappointment and frustration of buying online, which is commonly triggered via the privacy Information lost. On the Internet, the privacy records ought to be tracked and collected, and then it can be used to sharing with third parties, in order to ship junk mail mails or emails. The Federal Trade Commission (FTC) has statutory authority to restrict the net web page to gather records through "unfair and deceptive" trade practices (Earp & Baumer, 2001); however, it does now not have capacity to comprehensively control each undertaking amongst the Internet. According to Earp and Baumer's research, due to the fact of the lack of prison remedies, this implies electronic customers ought to be conscious of privacy risk and it may want to affect customer's obstacle to buying on the Internet. Moreover, it also leads to customers more carefully to figure out what sort of statistics will be revealed online, and to which internet site. From the survey results, most of customers willing to disclose their gender and ages, and 18% of respondents inclined to supply deposit card important points to commonplace internet web page whilst solely 3% of respondents indicated willingness to furnish the equal information to lesser-known internet sites. Moreover, web website that has privacy announcement and third-party verification could decrease some client concerns however the evidence is now not strong. Overall, customers are being very cautiously to expose their private statistics considering the felony environment of Internet is uncertain.

8.6.4 Trust and Trustworthiness

Mayer, Davis, and Schoorman (1995) described believe as, "the willingness of a person to be vulnerable to the actions of every other person based on the expectation that the different will function a particular motion important to the trustor, irrespective of the ability to monitor or manage that different party" (Cheung & Lee, 2006). This definition is extensively recognized and the most frequently referred to (Rousseau, Sitkin, Burt & Camerer, 1998) People purchase products and offerings are the most based totally on their degree of have confidence in this product or services, and agents both in the physical store or online shops. Online have confidence is the primary and vital element for building a relationship with customers. An existing lookup suggests that on line have lower confidence than the face-to-face interactions in the physical keep (Cassell & Bickmore, 2000).

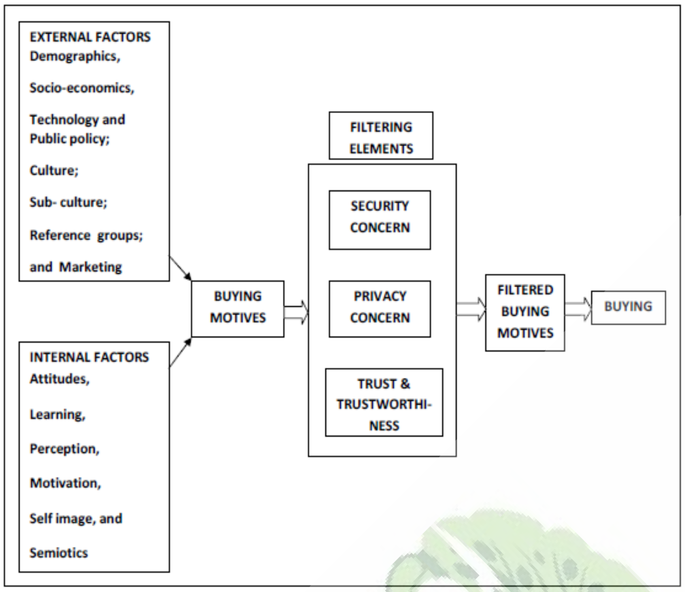


Figure 4. Online consumer buying behaviour motive model, Factors (F), Filtering elements (F) and Filtered buying motive (F) (FFF Model).

The FFF Model can be utilized as a premise to exactly investigate the components influencing the online buyer acquiring process.

8.7 Conceptual Model - Jayendra Sinha and Jiyeon Kim

The model was created to know the components influencing Indian buyer's on-line shopping practices (Figure 5).The model examines (1) the effect of risk factors identified in the past (comfort risks, product, and financial) and Indian logical bearer and foundation factors (concerns related with an item dispatching and merchandise exchange) on mentalities toward on line purchasing, and (2) subjective norm, state of mind/attitude, the Domain Specific Innovativeness (DSI), attitude, and Perceived Behavioural Control (PBC).

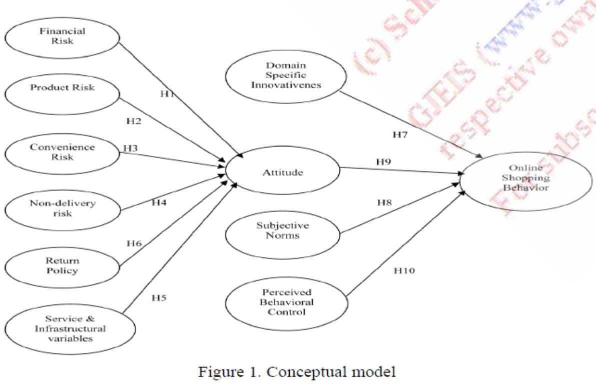


Figure 5. Conceptual model.

8.7.1 Perceived Risks

It refers to "the nature and quantity of risk perceived by way of a consumer in taking into consideration a particular purchase decision" (Cox & Rich, 1964). Prior to purchasing an item, a buyer regularly considers a significant number of risk related with the buy. Numerous investigations have shown rating of card security, purchasing other than contacting or feeling the item (material information), being not able to restore or return the thing, conveyance charges and protection (security) of non-open insights as they being the principle stresses of online customers (Bellman et al., 1999; Bhatnagar et al., 2000; Mohd & Suki, 2006). The more risks, the client may moreover prefer a physical retailer for the buying the item. While, the lower the risk the more note worthy the inclination for on-line shopping (Tan, 1999).

8.7.2 Financial Risk

It is characterized as the hazard stressed in leading monetary exchange by means of the web. Past query discovered monetary peril being a central reason purchasers choose to shop never again on the web (Miyazaki & Fernandez, 2001; Teo, 2002). Shoppers are likely to be reluctant to store online when they have stresses related with monetary risk, for example, the loss of Mastercard data, robbery of Visa data, or cheat (Bhatnagar, xzMisra & Rao, 2000; Forsythe & Shi, 2003).

8.7.3 Product Risk

It is characterized as the risk of getting the item that is stand-out from what's apparent to be in the item depiction. This might need to be come about because of the pleasant of the retailer's item portrayal and the visual portrayal of the item, fundamentally affecting the purchaser's capability to secure the item. Failure of substantial item examination and inadequate item records on screen may moreover expand stresses of customers.

8.7.4 Convenience Risk

It is characterized as the discontent originates from purchasing using the net. Distress in on-line acquiring is related with the means required to entire private little print to methods the registration shapes. The simplicity of shopping at the on line retailer's site affect customers' view of the level of solace shot (Jarvenpa & Tractinsk, 2001). Techniques for diminishing solace peril incorporate offering a convenient to explore web website as legitimately as a huge supporter benefit focus. A name focus, merchandise exchange, and a scope of charge choices all guide customers in feeling additional quiet (Lee, 2002). The simplicity of merchandise exchange is regularly a test to on line clients (Teo, 2002). The consequences of how to exchange items, the measure of time permitted to restore an item, and the cost related with the conveyance of stock again to the on-line retailer are habitually stresses related with an on-line merchandise exchange (Shim, Shin, Yong & Nottingham, 2002).

8.7.5 Domain Specific Innovativeness

It is "the degree to which a person is relatively before in adopting an innovation than different contributors of his system" (Rogers & Shoemaker, 1971, p. 27). In this way, in the on line purchasing setting, it is depicted to be technological and mechanical know-how specific inventiveness. On-line Shopping for Indian customers mean going away from their consistent shopping schedule. While purchasing on-line gives purchasers a wide broadness and profundity of stock contributions, it likewise expects them to assemble new science capacities so as to look for, consider and collect items. Research has demonstrated that shopping on line creativity is a attitude or normal for state of mind towards the online condition and a person's non-open attributes (Lassar et al., 2005; Eastlick, 1993; Midgley & Dowling, 1978; Sylke, Belanger & Comunale, 2004). Creative customers are additional to endeavor new activities (Rogers, 1995; Robinson, Marshall & Stamps, 2004). Selection of on line acquiring is illustration of person's dynamic trademark (Eastlick, 1993). It is anticipated that individual's innovation particular inventiveness has an inclination to store on the web.

8.7.6 Subjective Norm

As per the TRA - Theory of Reasoned Action (Azjen & Fishbein, 1980) the conduct of human being is comes before goals, which are framed in light of shopper's mentality toward the conduct or attitude and on emotional standards or subjective norms. Attitude mirrors what a person accepts. Emotional standards takes the customer's impression of the effect of immense others (like media, peers, family, specialist figures, and). They have a tendency to be a strong persuasive thing uniquely in the beginning times of advancement usage when clients have limited direct ride from which to build demeanors or behaviour (Taylor & Todd, 1995). Thus, it is for the duration of this stage of attitudinal development that on-line outlets can affect shoppers' propensity for shopping behaviours (Yu & Wu, 2007).

8.7.7 Attitude

Consumers' attitudes toward performing behaviour have been established as a robust predictor of behaviour (Fishbein & Ajzen, 1975). Attitude has been utilized in a number of methods in the context of on-line shopping. Adopting a new technological know-how is a feature of one's mind-set in the direction of it. It alludes to the shoppers' acknowledgment of the Internet as an acquiring channel (Jahng et al., 2001). It also means to shopper demeanors towards a specific Internet store (that is to what degree purchasers feel that purchasing at this store is engaging). Other going before examines have furthermore printed that outlook towards web based purchasing a full-measure indicator of making on-line buys (Yang, 2007, George et al., 2004).

8.7.8 Perceived Behavioural Control

Broadened by Ajzen and Madden (1986) the TRA into the Theory of Planned Behaviour (TPB) by including a new variable - perceived behavioural control as a determinant of conduct expectation/behaviour. Conduct perceived oversee alludes to shoppers' view of their capability to work a given conduct. TPB lets in forecast of practices over which individuals do never again have entire volitional control. It shows view of external and in addition internal imperatives on conduct, similar to accessibility of assets. PBC immediately impacts web based purchasing conduct.

8.8 Findings and Learnings

1. The dread of losing cash and money related points of interest has poor impact on attitude towards on line shopping. Additionally, the stress of non-conveyance of request will have terrible effect on state of mind toward acquiring on the web. That is, the more prominent the risk of dropping cash and probability of uncovering Visa data, the lower state of mind towards on line shopping. This is all around coordinated with discoveries of the Forsythe and Shi (2003) and Biswas and Biswas (2004). In these investigations, *financial risk* also called as monetary hazard, is a fundamental factor for not shopping on the web. Additionally the more prominent the probability of non-conveyance or delivery of request, the reduction mentality toward on-line shopping. It shows that the non-conveyance/delivery danger is a far reaching component for influencing state of mind and consequently conduct towards acquiring on the web. Individuals don't shop on line since they're not positive regardless of whether the arranged stock will be conveyed or not anymore and absence of reality and endeavors towards building accept through the shops makes it a decent measured reason.
2. The impact of item, product or a good risk and risk of convenience on state of mind toward web based shopping isn't huge. It is additionally steady with the discoveries from the past examination from Sinha (2010). This is likewise interestingly in difference with the discoveries of the current examinations (Biswas & Biswas, 2004, Forsythe & Shi, 2003;) where item and convenience chance or risk are essential noteworthy factors of risk for not shopping on the web. The conceivable reason of this unimportance can be that individuals probably won't shop online as a result of the aloofness and unwillingness of the customers towards online medium.
3. The infrastructural variables and return policy are not significant.

4. There is critical impact of DSI i.e. domain specific innovativeness on internet shopping conduct. That is higher/greater the DSI, greater/higher impact on internet shopping conduct. It depicts that the feeling of companions and associates will impact shoppers' web based purchasing conduct.
5. Overall, the risk of convenience was observed to be most important factor influencing Indian customers' web based purchasing conduct. Be that as it may, the outcomes demonstrated some fascinating contrasts when separated by sexual orientation. It was discovered that the male are more worried towards apparent hazard factors (and concerns related with non-conveyance of the item while female where just worried about the comfort. This is reliable with the discoveries of the examinations (e.g., Forsythe and Shi, 2003; Biswas & Biswas, 2004) where financial, product and convenience risk are an essential critical hazard factor for not shopping on the web. The conceivable reason of inconsequentiality in Indian females has all the earmarks of being the lack of interest and unwillingness towards online medium and as looking for them is even more a social movement. The reason of distinction amongst male and female's discernment could be that in India male are essential acquiring individuals from a family, so they are minimal concerned and thrifty with their cash.
6. The return policy is additionally not noteworthy with, male and for female. The reason is by all accounts apathy towards internet shopping which is diverse to the Lee's finding (2002) that expresses that returning problems prompt disappointment in buyers and that is the reason they abstain from shopping on the web.
7. For males, a huge or significant variable is technology innovativeness while for female respondents it was anything but a noteworthy variable since they are socially more dynamic than the females and maybe association with other individuals makes them more mindful of more up to date innovation and advancements. For females it isn't huge and the reason could be impact of different variables like propensity for shopping in physical shop and non-accessibility of value arrangement stage as around 46.5% concurred that they don't purchase except if they arrange cost and according to Westfall and Boyd (1960) neither the Indian purchaser nor the merchant is agreeable except if they arrange cost.
8. The impact of subjective norm on internet shopping conduct isn't factually bolstered for male. This implies the feeling of companions and associates won't probably impact Indian buyers' web based purchasing conduct. This finding is predictable with past examinations Wang et al. (2007) where companions, relatives and media (abstract standard) has not been a critical factor affecting the internet shopping conduct however not with others like Järveläinen (2007) and Khalifa and Limayem (2003) where emotional standard has been noteworthy. Since India is aggregate society, individuals get a kick out of the chance to go to commercial centers together and esteem assessment of others.

9. Implications

Internet purchasing is an important business venture show in online business. In the event that the on-line merchants support to convince and hang on line purchaser, they have to comprehend what the issues on-line shoppers use to choose their online purchase (Lim & Dubinsky, 2004). There are couple ways that association or dealer can do or do to induce the individuals who do now not shop online to end up being additional intrigued, and, at last, to be an achievable client. In the wake of taking a gander at fundamental inspirations that lead customers to keep on the web, on line dealers need to hold those issues in considering and endeavor to satisfy benefactor each time conceivable. Likewise, observation what make a few clients waver to shop on the web, advertisers need to find strategies to limit these negative angles so as to increase more prominent customers by methods for developing trustable and securer site, engaging and helpful site, giving on the web administration, and providing extra choice.

9.1 Trustable and Securer Website

Consumers concern about transaction safety and facts protection when buy on-line (Constantinides, 2004). Getting allowed endorsement from a business venture, for example, eTrust is one of the strategies to influence a web to webpage more noteworthy trustable (Korgaonkar & Karson, 2007). Thusly, a site will be more impervious and it will build customer confidence and prompt deal increment. Likewise, to limit the hazard, merchant can likewise convey organization name item in the site or even have its own one of a kind producer name, for example, Amazon (Korgaonkar & Karson, 2007). Holding and offering organization title item can upgrade the trust of the site. Brand distinguish is a standout amongst the most basic issues which affect client's purchasing choice (Lim & Dubinsky, 2004). It is fundamental for on line gatherings to guarantee purchaser that they will never utilize clients' information to different capacities by means of elucidating client privateness approach. This will in any event ease buyer worry about their wind up mindful of security. Online shops can likewise utilize incorporated component with a specific end goal to develop the trust in shielding customer's non-open actualities and evasion of abuse of reserve funds card method of installments.

9.2 User Friendly Website

Clients can be impacted by method for the photograph of the web site when they figure out what web webpage or shopper they need to purchase from. Not just need to organizations makes their anchored site, yet additionally should make it to be more attractive and more helpful. Online shops can trade a customer into a purchaser if the stores outfit goes and helpful realities of item, incredible customer benefit, and simple to-get to site. Their sites ought to have sufficient certainties however not be excessively overpowering. Putting unstructured or vain records in the site can decrease net handiness and convenience (Bigné-Alcañiz et al., 2008). Likewise, organizations and dealers should twofold check any single words in their site to decrease blunders and clients' misconception. Data wonderful and visual outline is fundamental effect on repurchasing (Koo et al., 2008). The readiness to purchase on-line will be low if the on line store absences of simplicity in seeking and looking at shopping, and item refreshes. Online keep need to make their site to be helpful for purchasers to seek item and administration. Making web plans and gateways novel and best in class and web atmospherics neighborly is a key to tempt guests. Additionally, if on-line shops support to change over vacationer into purchaser, they enhance their site by utilizing displaying benefactor an agreeable, coherent, intriguing and fundamental framework and easy dialect by utilizing developing quick web website with helpful format as simple as could reasonably be expected (Broekhuizen & Huizingh, 2009). Online charge method is some other issue that be dealt with in light of the fact that it impacts the readiness to pay (Wang et al., 2005). Online shops must make their expense way to be as easy and secure as could be allowed. To total, if online stores like to extend the client, they deal with their web website outline to be more issue free.

9.3 Online Service

Client benefit is as important as having a fabulous website. As indicated by Hermes (2000), seventy two percent of on-line clients uncovered that customer supplier is a most vital segment in on line obtaining fulfillment. In the event that the customer benefit is not any more helpful or reachable, customers will end up mindful of that companies are endeavoring to conceal something or never again proposing to clear up their issues. Online stores should supply the additional estimation of administration to customers and have client criticism direct in their web webpage (Yu and Wu, 2007). There must be intuitiveness buyer bearer in the site, so customers can contact with the merchant some place and whenever (Lim & Dubinsky, 2004). Programming downloading, e-frame request, arrange notoriety following, buyer remark, and comments are some of case that online merchants can use to satisfy their online bearer (Lim & Dubinsky, 2004).

9.4 Additional Option

Since customers are presently not able to contact or attempt items sooner than they purchase, on-line keep need to give them some additional choices. For example, a cash back confirmation is one of the ways to limit clients' concern (Comegys, 2009). Venders may consider furnishing unconditional promise strategy alongside conveyance charges discount to constrain obtaining risk furthermore, to avoid transport postponement and item lost, online keep can likewise participate with different organizations with skill in calculated to upgrade their circulation channels (Yu & Wu, 2007). Offering clients additional bendy expenses and advancements or giving a one-quit buying bearer are some more prominent illustrations that online stores can use to influence their undertaking to be triumphant (Yu & Wu, 2007). Online operators may likewise offer clients to utilize their financial balance number, or put away esteem card to entire their buy. It is likewise recommended that on line shops may likewise give benefactor an e-wallet which exchanges adjust from client's online monetary foundation record to the keep expense gadget (Federal Trade Commission, 2003). This may furthermore assist operators with attaining more deals from the individuals who need to purchase on line items or administrations however do never again have financial assessment card or don't want to utilize their reserve funds card on the web.

10. Limitation of the Study and Future Research

Below are the few limitations of the research and scope of future research:

- The literature on online consumer behavior is alternatively fragmented.
- Continuance behavior (repurchase) is mostly under-researched as most studies investigated intention and adoption of online shopping.
- Future lookup ought to use this framework as a basis to empirically discover the factors affecting the online buying process.
- Future research can also be done on exploring the influence of filtering elements – Security and Privacy concern on online shopping behavior.

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Annexure-I

FACTORS AFFECTING ONLINE SHOPPING BEHAVIOUR

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Workplace Presenteeism

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Abstract

Presenteeism is coming to the office or workplace even when ills. Presenteeism may seem like a positive attitude among the workers or employees, but it is, in fact, an economic indicator of disease burden. Coming to work even when ill can have implications for the employer and his employee. Presenteeism in the workforce is a growing concern for the management today. They need to take immediate short-term decisions if the worker should take a day off while sick or keep working. Presenteeism behavior can have both positive and negative consequences for the employee, his organization and job performance. It is essential to understand the clinical significance of the presenteeism behavior as it carries significant implications for organizational practice. The management should create a supportive work culture for their employees and communicate with them to lower presenteeism.

Keywords: Absenteeism, Organisation, Presenteeism, Productivity, Workplace

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Editorial Board Excerpt: Editorial board are in suitable alleyway answerable for the supremacy of the critique and cautious for recognize noteworthy 'worth mentioning topics', sourcing high quality manuscripts, handling schedule paperwork, and organizing the flow of manuscripts (*i.e. from author to referees and back in a camera ready shape*). The two most outcome mentioning attributes of any article suitable for GjEiS are (1) having a wide-ranging acquaintance of the subject area and (2) being organized. Depending on the dimension of the composition and its argument potency, the number of editors can range from one or two people to many more and sometimes to bring articulateness the blind reviewer process enabled to bestow with wide-ranging justice to time-honored editorial. Initially at the Time of Submission (ToS) submitted paper had a 04% plagiarism which is an accepted percentage for publication. The editorial board is of a surveillance that manuscript had a successive close watch by the blind reviewer's which at a later stages had been rectified and amended by a author (*amandeep*) in various phases as and when necessary to do so. The reviewer's had in a first round customary in a minuscule span restructured by authors. The comments related to this text are extremely detectable related estimating the stress in corporate sectors in India both subject-wise and research well thought-out by the reviewers during evaluation and further at blind review process too. All the comments had been collective at an array of dates by the authors' in due course of juncture and same had been incorporated by the author in totaling. By and large all the editorial and reviewer's comments had been en suite in a paper at the end and further the script had been mark down and decisive under **"View Point"** group as its things to see and illustrate consideration to the effort in relation to Workplace Presenteeism

1. Introduction

The contemporary work practices leave an impact on the health and working experiences in workplaces. Employees have to work under tighter deadlines for longer hours to meet the goals and enhance workplace productivity. While many employees take leave when sick and prefer to stay at home, there are workers who come to work despite being sick. The paper discusses the groin issue of presenteeism and the reason behind. It looks at various impacts of Presenteeism on the employees as well as the organization.

2. Presenteeism and Absenteeism

American Psychiatric Association states presenteeism to be a new word for an old problem. Because of the growing awareness, it is indeed surpassing to see how pervasive the issue of presenteeism (Rise Staff, 2018). While companies have been busy cutting down on absenteeism, presenteeism has been ignored. Presenteeism is the practice of employees to be at work and use privileges such as rest days and holiday allowances to catch up with work. There could be different reasons behind presenteeism (Higginbottom, 2018). Absenteeism is seen to be higher in countries with high insurance coverage. There are contradictory views when it comes to

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presenteeism and its adverse effects on the economic conditions and health (Dew & Taupo, 2009).

The old-fashioned HR departments focus more on absenteeism and often tend to ignore presenteeism. It is a mistake to measure success based just on absenteeism as widespread presenteeism can lead to much worse figures (Rise Staff, 2018). Research on absenteeism has focused on interventions to reduce absence due to sickness and improve the poor workplace conditions and absence cultures. Models of absenteeism work on improving job satisfaction and work involvement by changing attitudes and goals among the workers (Dew & Taupo, 2009). In contrast, presenteeism relies on self-report measures to measure its effects and impact on productivity. It is seen that when compared to absenteeism, presenteeism leads to higher drainage of productivity.

Some employees choose to work because they are workaholics and not take the days off for rest and recreation. Gradually, presenteeism leaves negative impacts on their performance and well-being (Higginbottom, 2018). The quality of work and engagement suffers, and the employees face issues like mental health and stress. Presenteeism can eventually lower the morale of the employee and can thus lower their performance. There is evidence that proposes that going for work is good for health and thus it suggests that presenteeism should be encouraged as stated by Dew and Taupo (2009). However, at the same time, it is more important to see that the workplace is free from any possible risk due to presenteeism. There is a growing interest in presenteeism as a negative impact is seen on the productivity of organizations due to employees going to work despite being unwell. It is seen as a potential productivity loss at w the workplace (Yang, Guo, Ma, Li, Tian & Deng, 2009). Productivity is more predictable than absenteeism and health was a significant factor. Depression and psychological problems figure heavily in presenteeism and rated to be good reasons to be absent from work. Some examples are family illness, inadequate transportation, bad weather or doctor's visit (Johns, 2010).

According to Higginbottom (2018), an employee needs to be actively engaged with his work, both physically and mentally for effective performance and outputs. Employers should be aware of the employees and gather information behind their presenteeism and absenteeism. The managers should build a positive culture to support good attendance and discourage both presenteeism and absenteeism. Employees come to work, even when they are sick because of various reasons. However, it is not possible for them to act to their optimal performance due to health problems. Although health and life expectancy have improved significantly and the retirement age is now older, one cannot ignore the physical and cognitive competencies that decline with age (Yang, Shen, Zhu, Liu, Deng, Chen & See, 2010). Thus, it would not be incorrect to assume that productivity loss due to presenteeism among the aging workers could be higher.

3. Reasons behind Presenteeism

There are different factors and reasons behind presenteeism. The employees may feel discouraged to take time off due to personal reasons and the company culture. If the workplace culture is less supportive and more restrictive, workers may prefer to come to work despite being ill. The worker may feel worried and stressed out about losing his or her job and would attend the workplace to prove their worth and dedication to their management (Rise Staff, 2018). It is seen that part-time workers with lower income are more prone to presenteeism. Thus, presenteeism prevails because of financial needs and job stress among workers.

Job insecurity and economic concerns are the primary reasons behind presenteeism that indicates social injustice in the workplace. Recent research shows that the workers are concerned about the quality of their work, the conditions they worked in, and injuries due to performing repetitive tasks (Dew & Taupo, 2009). Presenteeism is more common under tough economic conditions and when people fear about losing their jobs. Different illnesses impact the physical and mental capacity of a worker differently. At times, some workers suffer from more than one medical problem as asserted by Hremp (2004).

Past studies reflect that job stress have adverse impacts on the emotional well-being of the workers. Job stress is a significant predictor of presenteeism and can impact the emotional well-being of the workers. There are two kinds of job stress, challenge stress, and hindrance stress. Affective commitment is an essential mediator of presenteeism and reflects the values of an employee (Yang et al., 2009). Social exchange theory explains the outcome of stress based on communication and support for the colleagues, and staff within an organization. The emotional dependence of employees on their workplace and their relationship between organization can affect their commitment. These dimensions can decrease presenteeism while improving performance. These behaviors are valuable to organizations as they expand the workability of the employees as they fulfill their job responsibilities as asserted by Yang et al. (2009).

As asserted by Cho, Park, Lee, Min and Baek (2016), presenteeism is found to be higher in education service and treatment fields where it is difficult to find any substitutes for the workers. Certain psychosocial factors within workplaces threaten job and safety environment at workplaces. It is the socially vulnerable people like women, disabled and temporary workers that are prone towards presenteeism. A rise in physical workload and higher job risks are seen to increase presenteeism. High work intensity, heavy workload, and low work-speed control ability are other factors behind presentism (Cho, Park, Lee, Min & Baek, 2016). Other factors include time pressure, workaholism and time pressure that lead to a higher rate for presenteeism.

Employees with demanding jobs, higher work strains, and lower social support are linked to higher presenteeism. As a result, they develop further stress as they are not able to meet job demands. In order to meet the stricter job demands, the employees work harder at the workplace even while they are sick (Yang et al., 2010). Thus, having stricter job requirements means a higher probability of presenteeism. Among all medical conditions, depression is one of the major cause behind the disability. There has been a rise in the number of disability due to depression and leaves a negative impact on productivity (Evans-Lacko & Knapp, 2016). Thus, depression has a significant impact on workplace productivity.

4. Impacts of Presenteeism

Recent studies on presenteeism among US workers estimate the Lost Productive Time (LPT) cost to be well over $150000 million (Cho, Park, Lee, Min & Baek, 2016). Employs who have not taken any leave for three years show higher rates for coronary artery disease. Presenteeism raises health risk factors and leads to an increase in sick leave in the future. Presenteeism means having employees at work that could do more harm than good. Any kind of pain and stress, whether emotional, physical or mental can lead to increased fatigue and decreased concentration (Rise Staff, 2018). As it can result in a loss of productivity, it is an expensive problem for any business and organization. A stressed out and a fatigued worker can no longer be as productive at work. Moreover, if presenteeism goes unchecked, it enters a vicious circle and becomes a pattern. Presenteeism is a concept that describes the phenomenon of workers arriving for work despite poor-health conditions. There is an increased association seen between presenteeism and morbidity such as fatigue, musculoskeletal pains, and depression. When compared to absenteeism, there is limited research done on presenteeism (Dew & Taupo, 2009). Even a small decline can lead to a ripple effect on the productivity which can fall behind schedule (Hremp, 2004).

American Productivity Audit reports in a survey that the cost of presenteeism amounts to more than $150 billion a year

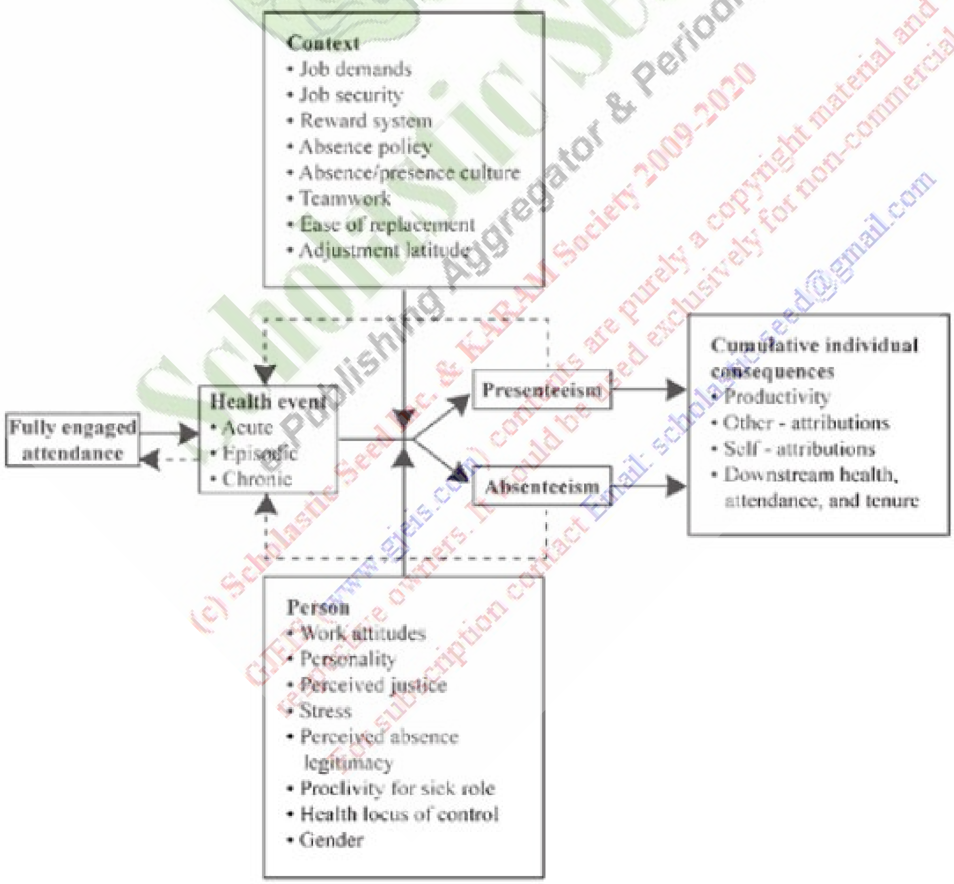

Image source: Pedersen KM and Skagen K. (2014). The Economics of Presenteeism: A discrete choice & count model framework. *COHERE, Department of Business and Economics*, 1(2), 1–51.

Figure 1. Economics of Presenteeism.

(Higginbottom, 2018). These costs are much higher than absenteeism due to illnesses among employees. Presenteeism can lead to depression and pain and further create productivity loss at work. While it is not easy to quantify the full cost of absenteeism, it is even more challenging to evaluate the impact of presenteeism. However, there is growing evidence that presenteeism is more expensive then absenteeism. Presenteeism prevents employees from being fully productive at work. It can further lead to some health issues like migraines, allergies, anxiety, and depression (Rise Staff, 2018). Researchers say that presenteeism can lower the productivity of the employees by one-third or more (Hremp, 2004). The issue is that presenteeism is not as noticeable as absenteeism as one tends to pay more attention to those who are absent from work. However, presenteeism undercut job performance and lead to productivity loss.

5. Different Models and Perspectives to Presenteeism

Well-publicized studies confirm that presenteeism is far more expensive when compared to disability and absenteeism. It is a lot better for sick people to be absent rather than show up at work and not perform to their best. Typically, employers pay three times more for direct medical care due to presenteeism (Hremp, 2004). Several studies have been conducted oneself-reported presenteeism and actual productivity loss. It is true that presenteeism is a problem for employers as well as the employees. When people do not feel good mentally and physically, they simply cannot perform to their best.

There are two perspectives to presenteeism, one is the costs associated, and the other is labor supply and demand. A model of presenteeism should address the question of how the worker makes a choice between presenteeism and absenteeism based on the role of health and possible economic incentives (Pedersen & Skagen, 2014). Discrete choice models based on behavioral interpretation explain a binary decision, the decision to go to work or decision to stay at home. The binary statistical model can be understood within a random utility framework as asserted by Pedersen and Skagen (2014). The first notion behind random utility models is that the revealed behavior is based on utility maximizing behavior. The choice is based on an alternative for which utility is maximal and characteristics of the alternatives.

Different count-models are used for analyzing utilization data in health economics, and the econometrics issues include hospitalizations or doctor visits. The count-models include negative binominal, Poisson models, zero-inflated negative binomial, latent class models and two-part models. The Poisson model is based on the probability that presenteeism and absenteeism occurs during a time period. The zero-inflated negative binomial is a two-part model that assumes two separate statistical processes. The mixture/latent approach interprets the latent groups in the population and the related data.

6. How to Prevent Presenteeism

Research shows that some poor lifestyle behaviors can impact presenteeism such as low physical activity and lack of good sleep. About 35 to 60% of the population suffers from poor sleep quality (Guertler, Vandelanotte, Short, Alley, Schoeppe & Duncan, 2015). Thus, it would not be incorrect to link sleep disorders with presenteeism. More than half of the population has at least two unhealthy lifestyle behaviors. Thus is it essential to study the link of poor lifestyle behaviors with presenteeism. It is essential to note that the majority of office workers spend their day sitting.

The first step for any organization is to be aware of presenteeism and recognize it as a problem. It is essential to communicate with the workers about their health issues and educate them on Presenteeism (Hremp, 2004). For example, as women are more likely to suffer from depression when compared to men, the management can take special steps in this direction. Many times, it is seen that employees are incorrectly diagnosed. They can be educated about how to manage their illnesses and get the right treatment as well as take the medications regularly as stated by Hremp (2004).

In order to curb the negative impacts of uncontrolled capitalism, there are initiatives to encourage healthier eating and active lifestyles at the workplace. Health promotion at the workplace could take care of both presenteeism and absenteeism. (Dew & Taupo, 2009). The management should develop a supportive work culture and motivate the employees to refrain from both presenteeism and absenteeism. They should be encouraged to stay at home and take rest if they are unable to give their best efforts. The goal is to communicate what is desired and what is not acceptable (Rise Staff, 2018). Open communications can help better cooperation and improve the work culture. The management should review the current time off policies and can introduce flextime and remote work options for their workers. Those steps can help remove the anxiety and stress among the workers. The physical and mental health is a priority for higher productivity and to meet the organization goals.

Presenteeism can lead to more serious illnesses and chronic ailments like asthma, migraines, headaches, back pain, and depression. The premiums paid to the insurer by a company pays to an insurer add to the direct health-related costs (Hremp, 2004). Even if presenteeism leads to lower direct costs, there can be massive indirect costs because of the greater loss in productivity. An ill worker impacts both quantity and quality of work. As stated by Hremp (2004), researchers are looking for reliable ways to how to tackle presenteeism by investing in education, treatment, and screening. For example, free consultations at the workplace can help the workers and their employers underhand their health issues and symptoms better.

Apart from the low-cost education programs, the organization should spend on providing better medical treatment and medications to keep their workforce healthy and lower presenteeism to improve productivity significantly (Hremp, 2004). The company can invest in pharmacy costs to boost productivity among workers with health problems. It should be seen as an investment in workforce productivity. There is also strong evidence that screening and outreach programs can help lower presenteeism cost-effectively. Specially designed employee assistance programs can promote healthy practices and active lifestyles among the workers. Better management of the health of the workforce can translate to improved productivity and thus give any organization a competitive business advantage in the market (Hremp, 2004).

It is essential to work on different psychosocial factors within workplaces to maintain harmony with work situations. As presenteeism not only impacts the mental and physical health of the workers, it lowers the productivity and increases social costs; there is a need to work on different measures on how to lower presenteeism (Cho, Park, Lee, Min & Baek, 2016). However, strong support from the management and co-workers can improve the work environment and leads to job satisfaction and performance. Supervisors should remain in close contact with the workers to address any complaints and lower any stress. The idea is to enhance job satisfaction and boost performance, and at the same time, lower presenteeism (Yang et al., 2010).

Employee assistance programs or EAPs can help lower costs associated with accident benefits, mental health care costs, medical costs, employee turnover, and absenteeism. Effective EAP treatment can result in a meaningful return on investment and can raise productivity and thus enhance profits for a company (Hargrave, Hiatt, Alexander & Shaffer, 2008). Daily problems leave an impact on job performance and if ignored can lead to serious psychiatric symptoms. Thus, EAPs can help raise productivity as they deal with a range of daily issues, problems in living and mental health concerns among the employees. Improving workplace conditions and creating better mental health in the workplace is getting essential. Participation in health promotion programs can help address depression in the workplace. However, the participation rates are much lower in low and middle-income countries as compared to high-income countries (Evans-Lacko & Knapp, 2016). Cost-effective interventions at the workplace can help to address depress in the workplace and deal with absenteeism and presenteeism.

7. Conclusion

The above discussion on presenteeism shows that it is a growing problem at workplaces. Apart from following the old-fashioned practice of just focusing on absenteeism, it is essential to do more research on presenteeism. Some employees come to work even when they are ill because of poor workplace conditions. The different reason behind presenteeism includes stricter work culture, purr economic conditions and the fear of losing the job. However, presenteeism leads to lower productivity as the employee faces mental health issues and stress. Employers should be aware of the reasons behind presenteeism and potential productivity loss. The primary reasons behind presenteeism are job insecurity and economic concerns. As Presenteeism raises health risk factors, it turns out to be more expensive as the company may face more sick leaves in the future. As presenteeism averts employees from working to their best capacity, it can further lead to more stress and pain and further lead to productivity loss at work. Thus, presenteeism is problematic for employers as well as the employees. The first step is to recognize presenteeism as a problem and encourage healthier lifestyles among the workers. Open communications and cooperation can build a positive work culture. Specially designed employee assistance programs can create a healthier workforce and lower presenteeism. It would be a mistake to ignore the phenomenon of presenteeism in the workplace. Economic and social constraints along with workplace cultures lead to higher presenteeism. Both the workers and the organization pays a heavy price because of presenteeism. There is still limited research on presenteeism, and more needs to be done in this direction.

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Annexure-I

Workplace presenteeism

ORIGINALITY REPORT

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Global Journal of Enterprise Information System. Volume-10, Issue-2, April–June, 2018. (http://informaticsjournals.com/index.php/gjeis)
DOI: 10.18311/gjeis/2018/23113
Conflict of Interest:
Author of a Paper had no conflict neither financially nor academically.

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A version of this article was first published in Elsevier's Editors' Update (Issue 41, November 2013)

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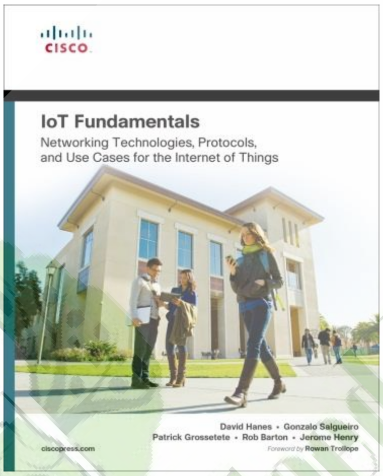
Book Review

IOT Fundamentals

Vinita Sharma
Associate Professor
New Delhi Institute of Management



The book “IOT Fundamentals” has been written by five leading CISCO IOT experts. The book introduces key concepts needed to successfully design IOT solution. It covers the principles and components of next generation wireless network and brings best practices for designing and implementing next generation wireless network.

The book is divided into 3 parts consisting of total 15 chapters. The first part is an introduction to IOT which is divided into two chapters. This part helps the reader to understand the newly emerged term IOT with the overview of lots of IOT examples.

Chapter 1 provides overview of beginning of IOT concept along with the current view of IOT as the next evolutionary phase of the Internet. Convergence between IT & OT is also one important topic, touched in this chapter. Examples of IOT covered in this chapter start from smart building to smart creatures.

The 2nd chapter talks about the network architecture, IOT Reference model, different types of networks of IOT and various designs of network topologies. Basically this chapter covers data management aspects of IOT. The chapter also illustrates various features of 2 stacks- ‘the core IT functional stack’ and ‘the IOT data management and computer stack’.

Part 2 of the book “Engineering IOT network” contains 6 chapters. After getting an interesting introduction of IOT and its smart applications in the previous chapters, the reader gets deep knowledge of IOT networks, engineering, smart objects applications, data analytics and security.

The 3rd chapter introduces the smart objects that are the building blocks of IOT and can be called as “Things” in IOT. These things of IOT may be wearables, or can be mounted on walls, bridges, windows, cars, electric equipments etc. the chapter also illustrates about sensors and their networks, actuator and smart objects in a very user friendly manner. This chapter also highlights recent manufacturing trends ex-MEMS, toward making sensors & actuators ever smaller and more embeddable in everyday objects. The last topic is communication protocols for wireless sensor networks. The topic is so well written due to which the reader starts having an urge of going through the next chapter of the book to explore new things.

After deployment of smart objects, they need to connect with one another within a network. This is what the chapter 4 is all about. This chapter also explains about different elements which are essential to understand to build a network for IOT. 802.15.4, 802.15g, 802.15e, NB-IOT, LTE variations are explained in the chapter thoroughly.

Chapter 5 covers the network layer of the protocol stack. This chapter also details how IP was optimized with enhancements like 6 Lo WPAN, 6TiSCH and RPL, to adopt to the low-power and lossy network (LLNs) where IOT usually operates.

The chapter 6 covers the transport layer of the protocol stack. The chapter guides the readers through different common application protocols, from MQTT, CoAP and SCADA to generic and web based protocols. This chapter also provides architecture recommendation to optimize your IOT network application and communication efficiency.

Chapter 7, "Data and Analytics for IOT" provides an overview of the field of data analytics from an IOT perspective and includes machine learning, big data analytics tools and technology edge streaming analytics and network analytics. The chapter explains the tools used to make intelligence of large amount of data and to analyse in real time Network flows and streams.

Chapter 8 is all about securing IOT networks. The chapter explains security practices of IT and OT and details how security is applied to an IOT environment. The chapter also explains challenges in OT security, IT and OT securities practices, formal risk analysis structures – OCTAVE and FAIR and phased application of security in an operational environment. This is the end of the second part of the book.

The last part of the book "IOT in Industry: contains 7 interesting chapters. IOT is transforming few major industries. This part of the book educates the readers how IOT can be used and what IOT architecture is recommended to increase safety, operational efficiency and user experience.

Chapter 9 gives an overview of connected manufacturing and architecture of the converged factory. The chapter also introduces the readers to industrial automation control protocols, which includes PROFINET, ETHERNET/IP, Modbus/TCP. Connected factory security, edge, computing and connected factory are the other important sections of this chapter.

Oil and gas are among the most critical resources used in the modern society. Chapter 10 introduces to this industry and its challenges during digitization of this industry. IOT architectures for oil and gas sector is explained thoroughly in a well interesting way. Security is also an important part of this industry which is explained in this chapter.

Main focus of chapter 11 is on the digitization journey of electric power companies and how IOT is being used to build smart grid networks. The chapter covers the introduction to the power utility industry and explains GridBlocks reference model which is a foundational architecture for the smart grid. The chapter also gives an overview of Field Are Network (FAN) Grid Block. The chapter ends with the concepts of SCADA security and NERC CTP for security of smart grid and explains the future benefits of smart grid.

Smart and connected cities include street lighting, smart parking, traffic optimization, waste collection and management and smart environment. Chapter 12 discusses the various IOT solutions for smart and connected cities. The chapter explains the IOT strategies for smarter cities, their architecture, security architecture, smart lighting pollution and traffic detection, smart parking, smart traffic control etc.

Chapter 13 talks about roadways, rail, mass transmit and fleet management. The chapter explains how IOT is used to allow for communication between vehicles and the infrastructure through protocols like DSRC and WAVE and how IOT increases the efficiency and safety of the transportation infrastructure. Smart cars, buses and their smart panels provide an intelligent view of the journey.

Chapter 14 shows various use cases of IOT in mining. The chapter also suggests an architectural IOT strategy for deploying smart objects in an ever –changing and often extreme environment. While this chapter covers a wide variety of topics in IOT and mining, it is far from exhaustive and is merely an introduction to the subject, based on a snapshot in time.

The last chapter is based on public safety which describes the emergency response IOT architecture and details how public safety operations leverage IOT to better exchange information and big data to respond more quickly and efficiently to emergencies.

The book has been designed and written in a user friendly manner, describing all concepts in detail and supporting them with good and live examples. The network diagrams and pictures which are made to explain the concepts are very useful and self-explanatory. Each chapter has a concluding summary and references to help readers gain a complete understanding of the concept and its application.

The book is suitable for engineering students. The management students can also have clear understanding of IOT fundamentals from 3-4 chapters in the beginning itself. Overall the book will give benefits to the students of all kinds of stream who are interested to know and understand the future applications of IOT.

Book Review

Marketing Research: An Applied Orientation (By Naresh K. Malhotra and Satyabhushan Dash)

Subodh Kesharwani, Madhulika P. Sakar, Jyoti and Shailza Kumari

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About Book

Introduction

Marketing research is an essential part in marketing. It provides valuable information about the potential of a particular market segment during a specific time. With the economy becoming more and more competitive with each passing day marketing research is the best way to increase customer satisfaction and to understand their needs. The book Marketing Research – An Applied Orientation written by Naresh K. Malhotra & Satyabhushan Dash is a comprehensive and practical book which presents a balanced coverage of both qualitative and quantitative aspects of marketing research.

Chapter Scheme

The book consists of 24 chapters those have been divided in 3 parts. First part provides basic introduction to the research and how a marketing research problem is defined and how to develop a suitable approach to it. As these are very crucial for the success of any marketing research project. Part two focuses on the research design formulation. In the former part of it, the author tried to explain the exploratory, descriptive and causal research designs. And in the lateral part the measurement & scaling, questionnaire and sampling techniques with statistical considerations involved have been explained in detail with suitable examples which is very useful for researchers. Third and the final part of the book is data collection, preparation, analysis and reporting. This part discusses the process of data preparation and how to make them suitable for analysis. The author has very well described both basic data analysis techniques for example, frequency distribution, cross tabulation, hypothesis testing etc. as well as advanced data analysis techniques for example discriminant analysis, logic analysis, factor analysis, cluster analysis, structural equation model etc. this part also covers report preparation and presentation and international dimension of marketing research.

Overview

The book has been written with a contemporary mindset, which have a balanced orientation of both theoretical and practical aspects. Opportunities for learning and testing have been provided with extensive exercises and activities. Concepts have been explained with real life and updated examples from marketing research perspective. Concept maps are given at the end of each chapter that helps readers to visualize the interrelated concepts. Ethical focus has been kept in every chapter of the book which talks about the ethics from the perspective of all the respective stakeholders. Every chapter of the book briefs the framework of marketing research in international perspective. The book is also useful to learn SPSS and SAS on your own by providing details step by step in each chapter. In the ending part of the book comprehensive cases are given with real questionnaire and data, that helps to test the understanding of each chapter. The book has covered very well how to understand the fundamental principles of marketing research and how to apply them in real life marketing situations.

Part 1

Chapter 1: Introduction to Marketing Research

This chapter emphasized on how the marketing research is done. Many real life examples of marketing research were given. It was found that marketing research is an integral part of marketing information system and decision support system. It also includes some active research, experimental research and decision research with exercise.

Chapter 2: Defining Marketing Research problem and developing an approach

This chapter included how the marketing research problem is defined and how an approach is developed to the same. As it is the most important task to do for any research project, before conducting the research programme. Pre requisite of a research programme are explained so well and in a systematic manner that involves discussions, pilot surveys, case studies etc.

Part 2

Chapter 3: Research Design

This chapter focuses on defining what is research design, i.e. what can be the different types of research that we conduct, and how are they different from each other. Major types of research are either exploratory or conclusive. Explanations are well supported by activities and examples. In the lateral part of chapter potential errors to the research design are discussed in brief. Errors are the variation in the mean value from the observed mean of the population.

Chapter 4: Exploratory Research Design: Secondary Data

Primary data of particular purpose is collected by research scholars. Secondary data is the data that has already been collected, other than the problem at hand. Collected data helps the scholar to formulate an appropriate research design. Analysis of secondary data may provide valuable insights for conducting primary analysis. Secondary data should be analyzed so carefully and thoroughly for its reliability and validity as it becomes the basis of the research. Later part of the chapter emphasized on the application of secondary data in computer mapping and how technology can be used to analyze secondary data

Chapter 5: Exploratory Research Design: Qualitative Research

Qualitative research and secondary data comprise the major part of research project. Qualitative research is used for generating hypothesis and identifying variables that should be included in the research. The chapter discussed how qualitative research is different from quantitative research, its role and various techniques. People may be unwilling or unable to answer certain questions that tap their subconscious, so for those cases, required information can be obtained through qualitative research.

Chapter 6: Descriptive Research Design: Survey and Observations

Objective of descriptive research is to get to know the descriptions of something- in research it usually means market characteristics or functions. The chapter describes the major tool of the descriptive research that is survey and observation that is based on primary quantitative data. Survey is a traditional way that includes; telephone interview, personal interview, computer assisted interviews etc. observations include; personal observation, mechanical observation, audit etc. The relative advantages and certain ethical issues that arise while applying these methods are also discussed.

Chapter 7: Causal Research Design: Experimentation

Causality defines cause and effect relationship. Chapter focuses on the concept of causality, its conditions, and role of validity in experimentation.

Chapter 8: Measurement and Scaling: Fundamentals and Comparative Scaling

This chapter describes the concept of scaling, and measurement, and fundamental scaling techniques. In measurement we assign numbers or other symbols to characteristics of objects as per the set rules and in scaling we generalize continuum upon which measured objects are located. All the four primary scales of measurements i.e. nominal, ordinal, interval and ratio are well defined with suitable examples, and it has been found that nominal scale represents the most basic and ratio scale represents highest level of measurement. Moving on further, comparative and non-comparative scaling techniques are discussed. Comparative scaling leads to a direct comparison of stimulus object with another. Whereas, non-comparative scaling leads to scaling of each stimulus object independently of the other object in the stimulus set.

Chapter 9: Measurement and Scaling: Non- Comparative Scaling techniques

Comparative scaling techniques have been explored in detail in the previous chapter, now this chapter focuses on the non-comparative scaling techniques. Non comparative scaling can either be continuous or itemized. It has been explained how the researcher should select a particular scaling technique in a given situation as the choice should be based on theoretical and practical considerations. The chosen scaling technique by the researcher should be one that generates highest level of feasible information. The scales are also to be evaluated in terms of reliability and validity. Reliability refers to the consistency of results and validity refers to the accuracy of measurement.

Chapter 10: Questionnaire and Form Design

This chapter discusses the importance, objectives, steps involved and guidelines for developing a sound questionnaire, as it is an important step in formulating a research design. A questionnaire must motivate respondent to complete the interview and give the needed information required by the respondents. It must specify what is to be observed and how the behaviour is to be recorded.

Chapter 11: Sampling Design and Procedures

This chapter focuses on fundamental concepts and necessary qualitative considerations and types of the sampling. Sampling techniques are classified into probability and non-probability techniques. In probability sampling each element has an equal probabilistic chance of being selected. Whereas, non- probability sampling relies on the personal judgment of the researcher. It has been explained that how a researcher should make a choice between probability and non-probability sampling i.e. based on the nature of research, degree of error tolerance, relative magnitude of sampling and non-sampling errors, variability in the population, statistical and operational considerations.

Chapter 12: Sampling: Final and Initial sample size determination

"The size of sample is determined not only by statistical calculations, but also by managerial considerations including time and costs"

BEVERLY WEIMAN, President and CEO

(Survey Sampling International)

This chapter describes the sampling distribution, statistical interpretation, standard error and sampling size. It is defined that statistical approaches to sample size determination are based on confidence interval. Chapter also covers the non-response issue in the sampling, and also the ways to adjust it.

Part 3

Chapter 13: Fieldwork

This chapter describes the fieldwork process, explains the selection, training and supervision of fieldworkers, validation of fieldwork and the evaluation of fieldworkers. The chapter basically emphasize on the role of fieldworkers in data collection process. As researchers either develop their own organization or contact with other external work agencies for collecting data.

Chapter 14: Data Preparation

This chapter focused on how the collected data is processed and interpreted. The chapter has very well defined the data cleaning process and ways to treat illegible missing and inconsistent responses. Emphasis has also been given on data analysis strategies and univariate and multivariate statistical techniques of data preparation.

Chapter 15: Frequency Distribution, Cross Tabulation and Hypothesis Testing

This chapter describes the basic data analysis associated with Parametric and Non Parametric hypothesis testing, frequencies including measures of location, variability and shape as well as cross tabulation with its associated statics such as chi square, phi coefficient etc.

Chapter 16: Analysis of Variance and Covariance

In this chapter, the author describes the Analysis of Variance and Covariance procedures and their relationship with other techniques. The key emphasis has been made on specialized ANOVA techniques applicable to marketing i.e. repeated measure ANOVA, non-metric analysis of variance, and multivariable analysis of variance (MANOVA).

Chapter 17: Correlation of Regression

This chapter describes the concept and types of Correlation in detail which provides a foundation for Regression Analysis. Starting from Simple Bivariate case to Multiple Regression Model, the chapter has explained every concept of Regression very well. The chapter also covers the topics of special interest such as, stepwise regression, cross validation, multi-collinearity etc.

Chapter 18: Discriminant and Logit Analysis

The chapter describes the concept, objectives, model, procedures and applications of discriminant analysis in marketing research. Binary logit model has also been compared with discriminant analysis and regression analysis with special reference to its advantages.

Chapter 19: Factor Analysis

The chapter discusses the basic concept of factor analysis, its model, its advantages, procedure for conducting factor analysis which includes problem formulation, construction of correlation matrix, selection of an appropriate model and determination, rotation and interpretation of factor.

It also explains how factor analysis is different from analysis of variance, multiple regression and discriminant analysis.

Chapter 20: Cluster Analysis

"Cluster analysis helps to identify groups or segments that are more like each other than they are like members of other groups or segments." –

Tom Myers, Senior Vice President,

(Client Services Manager, Burke, Inc.)

This chapter focuses on concept, scope, procedures and importance of cluster analysis in marketing research. Special emphasis has been given on discussing the steps involved in conducting cluster analysis in the context of hierarchical clustering followed by application of non- cluster hierarchical clustering.

Chapter 21: Multidimensional Scaling and Conjoint Analysis

This chapter on data analysis describes two related techniques for analyzing consumers' perceptions and preferences i.e. Multidimensional Scaling (MDS) and conjoint analysis. Basic concept, scope, steps involved in both the techniques has been explained in detail. MDS is used for obtaining spatial representations of respondents' perceptions and preferences, whereas conjoint analysis attempts to determine the relative importance consumers attach to salient attributed and the utilities they attach to the levels of attributes. These two techniques are complementary to each other.

Chapter 22: Structural equation Modeling and Path Analysis

In the previous chapters of Part 3(i.e. from chapter 14 to 21), the author has gone through single statistical techniques, now this chapter explain a unified analysis which is Structural Equation Modeling (SEM). Rather than exploratory SEM is used as a confirmatory technique, which is based on theory. So, all the relationship must be specified before this model can be estimated. In this chapter basic concept, theory, model steps involved, path diagram, constructs model fit of SEM has been explained in detail with suitable examples.

Chapter 23: Report Preparation and Presentation

After all research work has been completed, Report preparation and its presentation is the final step in a research project. Preparation of a comprehensive, well documented and appropriately referenced research report is an essential part of a valid research experience. It begins with the interpretation and analysis of data and results and it ends with the conclusions and recommendations. The chapter focuses on the importance, requirements, process and guidelines of report preparation and presentation.

Chapter 24: International Marketing Research

Due to the globalization of the market, as the world economy is being unified, International marketing research is growing rapidly. International Marketing Research is more complex and challenging than Domestic market research because of the prevalent multidimensional dynamic environment in different countries.

Conclusion

The particular book has been chosen for review because as a researcher we wanted to go through a detailed book which can cover all the aspects of marketing research. This book is different from other books available in market as it provides an updated, comprehensive and stepwise understanding of the marketing research process with a balanced mixture of theory and illustrations. Most of the other books of same title are too theoretical and just provide definitions with practically no illustration and numerous method and technique explained have become obsolete and redundant in the current scenario. Whereas, this book provides a rigorously researched text with a contemporary point of view of marketing research Book has helped me to learn marketing research in details with very well explained illustration and case studies. This book is also proved to be very useful to learn SPSS and SAS by providing detailed steps.

As a whole, the book is satisfactory and can serve as a source of information for teachers , researchers and learners to study marketing research in a comprehensive manner ,the authors deserves to be congratulated for useful book in the field of research.

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A.S. (PG) College
Aggarwal College Ballabgarh
Ahlia University
AIACT&R
AIACTR
AIMA
AIMA-CME
Aligarh Muslim University
Allahabad Institute of Engineering & Technology
Ambedkar Institute of Advanced Communication Technologies and Research
Ambedkar Institute of Advanced Communication Technologies and Research, Government of NCT of Delhi
American Institute of Physics (AIP)
Amity School of Business, Amity University
Amity University
Andalas University
Ansal University
APD Cargo
Arizona State University
Auckland University of Technology

B

Baba Banda Singh Bahadur Engineering College
Baba Mastnath University
Babasaheb Bhimrao Ambedkar University (Central University)
Babasaheb Bhimrao Ambedkar University (Central University)
Banaras Hindu University
Banasthali University
Behbehani Projects
Bennett University, Tech Zone – II
Bhagwan Parshuram Institute of Technology, GGS Indraprastha University
Bhagwant University
Bhai Parmanand Institute of Business Studies
Bharati Vidyapeeth University
Bharati Vidyapeeth's Institute of Computer Applications and Management (BVICAM)
Bharti Vidyapeeth College of Engineering
BIET
Birla Institute of Technology
BIT
BPSMV University
BT- e-Serv Pvt Ltd
Buddha Institute of Technology
BVIMR

C

C.S.J.M University
C.S.J.M. University
California State University
CARE
Carnegie Mellon University
Center for Advanced Security Research
Central Bank of Sri Lanka
Central Power Research Institute
Central University of Himachal Pradesh
Ch. Charan Singh University
Chandigarh Engineering Colleges
Chandigarh University
Child Welfare Committee
College of Vocational Studies, University Of Delhi
College of Vocational Study, Delhi University
COMM-IT Academy
Comm-IT Career Academy
Cordia Group of Institutions
CSJM University

D

D. A. University
Dayalbagh Educational Institute
Dayalbagh Educational Institute (Deemed-University)
DCE
DCRUST
Delhi College of Arts and Commerce, University of Delhi
Delhi School of Economics
Delhi Technical University
Delhi Technological University
Delhi University
Department of Computer Applications
Department of Statistics
Dewan Institute of Management Studies
DIET
DOEACC Society
Dr. B.R. Ambedkar University
Dr. RML Avadh University
Drexel University

Dronacharya College of Engineering
Dronacharya Group of Institution
Dronacharya Group of Institutions
Dwarkadas J. Sanghvi College of Engineering, Mumbai University

E

East Tennessee State University
Eastern Academic Research Consortium (Eastern ARC)
Eastern Illinois University
Eastern Michigan University
Easy Business Solutions
Editor-in-Chief, GJEIS
Enterprise and Business Relations
European University Viadrina

F

Fiji Trades & Investment Board
FMG Academy
FORE School of Management
Fortune Institute of International Business
Foundation for Futuristic Cities

G

G. B. Pant Government Engineering College
G. G. S. Indraprastha University
Galgotias College of Engineering and Technology
Geetanjali Institute of Technical Studies
GGS Indraprasth University
GGS Indraprastha University
GGS-Indraprastha University
GGS-IP University
GGSIP
GGSIP University
GGSIPU
Gitarattan International Business School
Gitarattan International Business School Rohini
GJEIS
GLBITM
Global School of Management Science
GN
GNIM
Government first Grade College
Government PG College, Kumaun University
Govind Ballabh Pant Engineering College
Govt First Grade College Gulbarga
Govt. of NCT of Delhi
Graphic Era University
Greater Noida College of Technology
Greater Noida Institute of Technology
Gujarat Vidyapith
Guru Arjan Dev Institute of Development Studies
Guru Gobind Singh Indraprastha University
Gurukul - The School
Gurukula Kangri University
Gyan Vihar School of Education, Suresh Gyan Vihar University
Gyan Vihar University

H

Harcourt Butler Technological Institute
Harvard University
HCTM
Hewlett Packard Enterprise
Himachal Pradesh Technical University

I

I.I.T.
I.K. Gujral Punjab Technical University
I.P. University
IBM India Pvt. Ltd
IES Management College and Research Centre
IET
IGDTUW
IGIT
IGNOU
IGNOU Regional Centre
IGNOU, School of Tourism and Hospitality Service Management (SOTHSM)
IIM
IIMT Engineering College
IIPA
IIT
IIT-D & IIM-A
IITM
IK Gujral, PTU
IKGPTU
IMS Engineering College
Indcare College of Law
INDCARE Trust-An NGO
Indian Institute of Technology
Indian Institute of Technology Delhi

Indira Gandhi Institute of Technology
Indira Gandhi National Open University
Indira Gandhi National Open University (IGNOU)
Indira Gandhi National Open University (IGNOU) Regional Centre
Inoviea
Institute for Technology & Management
Institute of Management & Technology
Institute of Management Studies
Instituto Tecnologico de Cd. Guzman
International Federation for Engineering Education Societies (IFEES)
International Zinc Association
IP University
Islamic Azad University (IAU)
itarattan International Business school
ITC Infotech India Limited
ITM Business School
ITM University

J

J.S.S.Academy of Technical Education
Jaipuria Institute of Management
Jaipuria Institute of Management Studies
Jaipuria Institute of Management Studies (JIMS)
Jaipuria Institute of Management Studies Vasundhara
Jamia Millia Islamia
Jesus and Mary College, Delhi University
JIIT University
JNTUH
JSS Academy of Technical Education

K

K. J. Somaiya College of Engineering
KARAM Society
King Abdul Aziz University
King Abdulaziz university
KITS(S)
Knowledge Resource Development & Welfare Group (KRDWG)
KRDWG
Kumaun University
Kurukshetra University

L

Lal Bahadur Shastri Institute of Management (LBSIM)
Lingaya's University
Lingaya's University
Lord Krishna College of Management
Lucknow University

M

Maharaja Agrasen Institute of Technology
Maharaja Surajmal Institute of Technology
Maharana Pratap Engineering College
Mahatma Gandhi Central University
Mahraja Agrasen College
MAIMS
MAIMT
MAIT
Manav Rachna International University
Mangalmay Institute of Management
Mangalmay Institutions
Manipur University
Marketing KEC International Limited
MATRIX CAD Academy
Mewar University
MGM College of Engineering
MHE
MIMT
Ministry of Communication and Information Technology
Ministry of Economy and Commerce
MIT
Mizoram University
Morehead State University
Motilal Nehru National Institute of Technology
MSJ Govt. College
Mumbai University

N

Naraina Vidya Peeth Engineering and Management Institute
National Disaster Management Authority
NDIM
Netaji Subhas Institute of Technology
Network & Society Area, MIT SENSEable City Lab
New Delhi Institute of Management
New Delhi University
NIET
NIFM, An Institute of Ministry of Finance
NIT
NIT Kurukshetra
NIT, Kurukshetra
Nucleo Universitario Los Belenes

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Petroleum University
PGDAV College (M), (University of Delhi)
PGT Economics
Pioneer Institute of Professional studies
Pollyanna Positive Parivartan Pvt. Ltd
Prarmbh- The State Level School for Teacher Education
Presidency University
Punjab Technical University
Punjabi University
Punjabui University

R

R&D, Innovation Lab, Tata Consultancy Services
Raffles University
Rashtriya Sanskrit Sansthan
RDIAS
RIMT University
Rimt University Mandi-Govindgarh
RIMT/IMCT
RKGIT

S

S.B.I.E.T
SA Jain college
SABIC
Sant Gadge Baba Amravati University
Saraswati College of Engineering
Saraswati College of Engineering, Kharghar
School of Engineering and Technology IGNOU
School of Engineering and Technology, IGNOU
School of Engineering and Technology, Indira Gandhi National Open University
School of Management and Information Systems & Business and Law Victoria University
School of Management Sciences
School of Mechanical, Aerospace and Civil Engineering, The University of Manchester
Seth Padam Chand Jain Institute of Management
Shaheed Bhagat Singh College, University of Delhi
Shambunath Institute of Engineering and Technology
Sharda University
Shinawatra International University
Shinawatra University
Shri Mata Vaishno Devi University
Shri Venkateshwara University
Somaiya Vidya Vihar
SOMS, IGNOU
Sri Aurobindo College (Eve), University of Delhi
Sri Aurobindo College, Delhi University
SRI Aurobindo College, University of Delhi
Sri Guru Granth Sahib World University
SRM University
SRMSCET
St John's College
Systems at EWOS Group

T

Tata Consultancy Services
TCS
Thapar University
The Australian College of Kuwait
The Chinese University of Hong Kong
The Univeristy of Faisalabad
The University of Faisalabad
Tilak P.G. College
Trinity University

U

UIM
United College of Engineering and Research
United Institute of Management
Universidad Carlos III de Madrid
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V

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Vidyavardhini's College of Engineering and Technology
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Vishveshwarya Institute of Engineering &Technology
Vishveshwarya School of Business Management (VSBM)
Vivekanad Institute of Professional studies (VIPS)
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Western Michigan University
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X

XLRI Jamshedpur – Xavier School of Management

Z

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1. Empirical Research Papers (ERP) report on completed EIS research that complies with rigorous scientific standards. ERP present original results of completed research studies with the aim of obtaining feedback from fellow researchers. [Limit 16 Pages]

2. Theme Based Papers (TBP) are short papers that present the design and preliminary results of ongoing EIS research studies with an endeavor of obtaining early feedback and further guidance from experts and peers. TBP will be evaluated using the same academic standards as regular research papers (except for completeness requirements). [Limit 12 Pages]

3. Case Study Based Papers (CSBP) describes real-life experiences with EIS that authors wish to share with fellow practitioners and EIS researchers. They focus on problems and solutions in specific contexts. Their aim may be to help other practitioners facing similar problems or to solicit help and possible solutions from other practitioners (or EIS researchers). [Limit 10 Pages]

4. View Point (VP) is a situation for which something is pragmatic or considered as a point of view. The purpose of VP is to share different views about the IT related products and what individual think about that. [Limit 8 Pages]

5. Research Thought (RT) can refer to the opinion or arrangement of research ideas that effect from thinking, the act of producing thoughts on diverse interdisciplinary collaborative research areas or tools with which researcher can formulate it's research paper, choose a method for undertaking a study, write up for findings and discuss the outcomes in a discussion section. In this head author can throw a light on various research tools which can be helpful in formulating a research paper. [Limit 5 Pages]

6. Student Research Initiatives (SRI) is a research initiative by a grass-root researcher and technocrats. This head facilitate students/learners to pursue independent academic and imaginative effort and engage in research under the supervision of a faculty mentor with an intention to heighten student research as a means of collaborative learning, critical thinking and the establishment of knowledge. [Limit 12 Pages]

7. Dissertation Snapshot (DS) is an excerpt from a researcher's own thesis or dissertation which had been previously published or submitted in the form of research project or its own doctoral work. The rationale is to raise the curtain on an application and thought used by researcher in a brief manner with an intention to promote the future researchers to sequel their thoughts. [Limit 10 Pages]

8. Questionnaire Format (QF) A new philosophy called "Questionnaire Format" had been introduced, in which we are going to publish distinguish questionnaires that navigates the usefulness of it in building research and how to communicate with the respondents . The rationale behind introducing this QF is to give a glimpse about the structure and the pedagogy. QF on the other hand provides a niche to grass-root researcher about their various thoughts related to preliminary research and facilitate them in linking with a respective research papers which the researcher had visualize or going to plan in a coming future. This is a new inventiveness under the GJEIS Academic Social Responsibility(GASR) and would be complimentary/charitable in nature. [Limit 5 Pages]

9. Book Review (BR) is a literary criticism in which a book is analyzed based on content, style, and merit. BR can be a primary source opinion piece, summary review or scholarly review. Books can be reviewed for printed periodicals, magazines and newspapers, as school work, or for book websites on the internet. A book review's length may vary from a single paragraph to a substantial essay. Such a BR may evaluate the book on the basis of personal taste. Reviewers may use the occasion of a book review for a display of learning or to promulgate their own ideas on the topic of a fiction or non-fiction work. [Limit 3 Pages]

10. Biographical Note of the Luminary in an Area of IS We as per our culture acknowledge in every issue a great leader, Entrepreneur, Technocrats, Academician etc., who contribute a lot to a society in an area of IS. [Limit 2 Pages]

11. Great Enterprise Contribution to Society in Information System Perspectives deals with those enterprises contributing a lot to the society, and considering themselves a wizard in the field of Information System, we publish their profile, with the intention that their creation/contribution would be viewed and duly appreciated by the corporate and academics, all-around the globe. The purpose behind this is to broadcast the most visually powerful, immersive and engaging rich media applications on the Web. [Limit 2 Pages]

12. Award is something given to a person or a group of people to identify their fineness in a definite field especially in an area of EIS, it is rather a certificate of excellence for their contribution in academia or in a corporate world. This start throws a light on an entity or a gamut of researcher who had been honored for their extra ordinary input. [Limit 2 Pages]

13. Homage means great respect and tribute, or something done to honor a person. We in GJEIS pay homage to our ancestor's and say prayers in admiration to their memory which includes academicians, technocrats and great thinkers. The special respect would be shown publicly by sharing their achievements and contributions in writing which includes images, excerpts, testimonials, write-up, etc. [Limit 2 Pages]

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