RESILIENCE BEHAVIOR AMONG INDIAN WOMEN

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ABSTRACT

In our today's environment learnt folk very often talk about 'Resilience' in the workplace and does research on it with structured survey method and designated sample size. But 'Resilience' is very much inextricable with our lives more particularly with our women. The very simple meaning of the 'Resilience' is ability to feel better and rejuvenate to the original shape. We know human life is Pandora's Box of logger heads and lot more issues, in the family environment and situation, the scale of 'Resilience' real matter for the development of family as a whole, more particularly for the new generations.

This paper is indeed conceived on the ground reality of Indian Women, who are at default is backbone of the family's growth and has intrinsic stimulation towards family's responsibility and accountability as compared to the men. No matter what class they belong to, it means Top class family, medium class family and Low-class family, the role of women in family is very much empathically attached. Further in this firsthand research work all the data and information whatsoever in nature were from the ground level and on pragmatic mode (situation based). Hence the analytics are construed on original information than any kind of fabrication and adorn.

Women basically a wholesome and comprehensive term, which includes mother, sister, daughter, wife, and all feminine gender. In Indian practice and scenario 'Feminine Gender' is very much synonymous with divine respect in the form of Goddess.

In this firsthand study it was observed that, the behavioral scale of resilience, tolerance and adjustment is much more in Indian Women for the growth of family and even the obedience and sacrifice are pre-existed, which supplicate to the resilience.

Keywords: *Inextricable, Pandora's Box, original shape, comprehensive term, tolerance, adjustment.*

INTRODUCTION:

The term resilience coined and originated by psychologists and psychiatrists. In the course of study and research it was noticed that the term resilience has made paradigm shift from mental health to general health and behavior of persons. In the process of research on the 'Resilience' there is variations and argument on the term. However few psychologists namely Werner, Luthar, Masten etc., whole heartly vouch for the simplified definition of the term.

Resilience need the presence of the clear substantial risk and adversity. Because s/he may gain in one aspect but certainly lose in other one. For instance, Indian women very much knows she loses her comfort and cushy things at beginning but later commands the situation and perhaps situation may be matriarch. Thus, the construct of Resilience has two dimensions namely.

1. Significant Adversity
2. Positive Adaption

Based on these two dimension the Resilience can be measured. Thus, resilience never acts in individual term it has to have indirect inferences. The Survival of person is the significant adversity for his Resilience (do or die position) and for the development of the situation is called positive adaption in the Resilience.

LITERATURE REVIEW:

Augmentation in research certainly leads to the arguments and lot more diverse meaning and definitions, research on resilience is since 1980. The term resilience is best understood as 'Bounce-Back' and ability to recover quickly from adversities and adapt to the life's adventures. In the literature it was noted the four types of classification of resilience. They are,

Diagram No 1:

Classification of Resilience

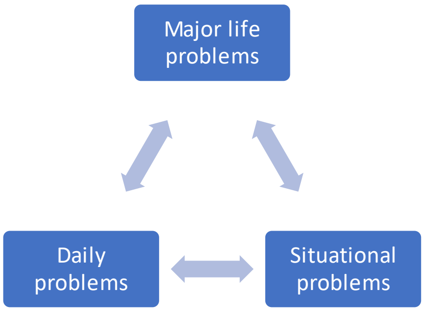
Source: Secondary data

Discussion:

Above said types of Resilience in general we encounter with our life issues which are depicted in the following diagram,

Diagram No 2:

Application of Resilience in Problems



Source: Secondary data

Major Life Problems:

These problems of our lives are basically by nature, for instance death of loved one, chronic health issues, homeless, and often traumatic and which scar for longer years. The spirituality and listening to the inspiring stories and exchanging dialogs with positive mind set people, certainly subdue the problems over period of a time.

Situational Problems:

The magnitude of this problem comparing to major life problem is less and not much serious. But cause serious consequences upon work, relationship, life humor and self-satisfaction. The situational problems generally referred as living with unpleasant family members, rift with spouse, bullying and temporary loss of job or business dealing. The life span of situational problem is for shorter time. The best remedial steps would be nurturing resilience to get over the situational problem.

Daily Problems:

The problems and hurdles what we face in our daily life like, traffic jams, rude colleagues, work pressure to meet deadlines, work efficient and autonomy. The best remedy for such problem to keep at bay is the working on time and work prioritizing on need base and importance of the work.

Now let us see the application of four kind of resilience in the above problems.

1) PHYSICAL RESILIENCE:

Physical resilience pertains to our body's agility to face the physical challenges and overcome with efficiently and effectively when it happens. Let us understand, *Major Life Problem + Physical Resilience* a person who have undergone dental surgery takes longer time (6 to 9 months) to come back on its original shape till then he needs to suffer with eating issues, incorrect pronunciations, excruciating pain, may avoid public meetings etc., is the opt example of physical resilience with major life problem. The role of *Physical Resilience in Situational Problems* it denotes the presence of stamina in expected and unexpected situation. For instance, attacked by goons it needs physical resilience to deal with them and run away from the situation to save yourself. *Physical Resilience + Daily Problems* for our daily chores of life like, eating healthy food, physical exercise, rest, household work, self-study, nurturing and nourishing to children and parent etc., land into conflict and call for physical resilience because of the paucity of time and tied over with deadlines. The agility and flexibility in physical resilience certainly overcome such issues.

2) MENTAL RESILIENCE:

This is all about thinking and analytically taking decision based on the alternatives and options, which suits to solve the problems. The applications of this in three different problems are dealt herein. *Major Life Problems and Mental Resilience*- when we grew up in the catastrophe, it really need mental resilience to save own life and help others at our cost of life, like flight landed on sea etc., such critical decision requires mental resilience. *Situational Problems and Mental Resilience* mother has some health issues but despite of that, she prepares food for family in situation her mental resilience pushed her to deal with the situation. *Daily Problems and Mental Resilience*, our life is full of challenges either short term or medium term viz daily problems may be at office or at home. The best way to tied over is keeping engaged with the prioritize of the work and interest.

3) EMOTIONAL RESILIENCE:

The emotional resilience basically relates to the emotional intelligence, emotional awareness, and perseverance, People with emotional resilience accept the adversities with flexibility, positive thought and had an attitude that, times are tough, but they will get healed. Let us understand the application of emotional resilience in three different situations as mentioned in the above. *Major Life Problem and Emotional Resilience*, it is experienced that life is not bed of roses and most of the times not synergy with our plan. In this study Indian Girls marriage really a relevant topic of Emotional Resilience, pertains to the fear of unknown. In this context, bride's positive behavior and time factor shall make the situation very grateful and millions of silver linings over the major problems. *Situational Problems and Emotional Resilience*, in this it generally involves other people, it how the situational issues may get aggravated, instigated and the ego factor work as fuel to fire. The best example of this is the workplace and working with complex team. Best tool to get rid of such or otherwise kind of situation is to be with polices and find better option to avoid the loggerhead. *Daily Problems and Emotional Resilience* is all about our ability to imagine, dream and plan with positive highlights. Daily Problems and hurdles may be buckled with just walking, listening to music, mediation etc.,

4) SOCIAL RESILIENCE:

It is all about networking with others socially. It includes connecting with friends, working in teams, working for social cause. Social Resilience basically builds on trust, tolerance, diversity, and respect. Let us see the impact of Social Resilience on three problems. *Major Problems and Social Resilience* it is experience that, aftermath of natural calamities most of the countries, nations, neighbors, family members come together to help and assist in times of need is the best example of social resilience in major problem. *Situational Problems and Social Resilience the* change management and revamping workplace and organization which involves leanings, new teams and new organizational policies is the best reference of social resilience in the situational problems. Although such situational change may give confusing look at first, but later things cherish. *Daily Problems + Social Resilience* it is process of taking initiative to stay engaged productively. For instance, meeting people, saying hello at the workplace, even we don't like need to do that work. Yes keeping engaged productively keeps away the daily problems.

Thus, these four types of resilience with examples of three kinds of problems (major, situational and daily) it understood that resilience is not so easy but resilient people must have undergone that worst situation.

WHY THIS STUDY:

The problem statement of the study is that most of the time Positive Behavior is the sole answer to the most of situation and it work as panacea. But seldom the society and women folks, have this soft tool. Further the Resilience certainly has the system of input and output process. As to understand and create better visibility and applicability of Resilience factor among Indian women this study is carried out.

Author of this paper has done empirical study and experience on the Behavioral Science and most important he wanted to give the justification by virtue of this study that, Indian Women indeed has better behavior than men. Because of this positive behavioral power only most of the Indian families are cherishing and progressing in most of the odd situations.

OBJECTIVES:

The core study objectives are,

a. To study the women's resilience status both at workplace and family.

b. To examine the behavioral impact on the resilience.

c. To identify and earmark master resilience tips.

RESEARCH METHODOLOGY:

This is a very comprehensive study, a blend of actual occurrence at the ground level and firsthand data. The structured questionnaire, designated study area, and customized sample size were in the pea size references as comparing to the open ended and pragmatic analysis. Indeed, the authors of this paper have undergone an extensive and relevant study of literature and have used enlightened hand-on-approach. It is very interesting that, author have personally handled the rankle and unpleasant situation and that's the most urging factor and driving force to write this paper.

The secondary and basic primary data have been squeezed from proper sources and judicially applied to arrive at meaningful findings and result oriented conclusion. This paper being a conceptual one, simple statistical tools have been in placed wherever necessary to right size the information.

RESILIENCE BEHAVIOR OF INDIAN WOMEM:

It is universally acclaim and understood that Indian Women has greater magnitude of resilience behavior in their daily lives. This study indeed vouches the statement with the experientials. As we know there are four kinds of resilience namely, physical, mental, emotional, and social. These were hoovering in three categories of problems namely, life major problems, situational problems, and daily problems. Let us understand role of resilience in Indian Women's Behavior in above circumstances.

The insightful study has enlightened that among four kind of resilience three are with us physical, mental, and emotional but the social is the extravert and has introvert. The Indian Ethos and Etiquettes really gives great values to apply in our lives for better living and leading happy life. In homely environment Indian Women have been groomed in all three area of resilience at default. The practicing of home etiquette like doing the home chores by themselves, taking care of elder and younger at home, it makes them physical fit to handle the situation whatsoever in nature at later stage. Alike they manage the hotchpotch situation of the family with mental resilience and similar to this the emotional resilience. Most of the time it is observed that Indian Women are emotional attached to their loved one but with their positive resilience power they overcome the emotional barrier. The ingrained strengths of resilience have made Indian Women's Behavior very positive and productive in all three categories of problems. Life Major problems, Situational Problems and Daily Problems. They do it better because of ethos and etiquettes what have practice at their homes, keeping positively engaged, doing some physical movements (yoga etc.) and spiritual activities at their leisure time or otherwise a schedule of the same. This sound practices are helping Indian Women to perform better in …

1) Work-life-balance
2) Gain respect
3) High morale
4) Better public opinion
5) Enjoy work satisfaction
6) Execute the planned ideas
7) Gain support

This is the realistic behavior of Indian Women which are being embedded from the childhood by virtue of etiquettes and ethos at home by elders, that certainly made them tested their resilience in all time.

Findings:

a. It is found that the practicing of ethos and etiquettes at childhood in families gave greater status to the women. And daughters are treated as 'Heavenly Angels' in the family. In the life journey the 'Motherhood' is a pious status of women. This indeed make them more of resilience and gaining the high towering status.

b. The study reveals that the grooming itself at hardwiring time is an important input-engine of behavioral resilience. At the initial stage undergoing with tough like situation and incidents is like the antecedent for greater resilience. The humane of childhood learnings is being supported to gain the resilience to face all kinds of situation and problems.

c. During the study and research the major and master panacea tips of resilience are the knowing the things, be positive and patience to react to the situation, because time is the great healer. The general major tips are,

1. Be positive reactive
2. Be patience
3. Be aware of the happenings
4. Be on the threshold of resilience always
5. Be in the practice of antecedent to get better thereof.
6. Be on the go-getter platform
7. Be instrumental in the work
8. Be dependable in team
9. Be positive and sportive

These are major tips one can use to gain the resilience to tie over the traumas.

CONCLUSION:

To sum up the study and research the Indian Women's Behavior intrinsically ingrained with Resilience and abilities to handle hotchpotch kind of situation have been groomed at hardwiring time at home. The great source of the resilience has been the ethos and etiquettes learnt at the childhood.

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KNOWLEDGE MANAGEMENT CYCLE (KMC) IN NETWORK CONTEXTS

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ABSTRACT

In the post-modern information economy, information is a vital asset for the economy, yet we are not completely ready to see how we can oversee data and information cycles to acquire upper hand. Another idea of data the board, i.e., data the executives in network conditions (KMC) has been presented. Furthermore, we are presenting an essential data the board system (SKM). SKM is a cycle that includes the accompanying advances: 1) key vision, 2) information vision and key data recognizable proof, 3) development, 4) data insurance, 5) execution, and 6) data use. Extension of sources and thoughts dependent on organization data fill in as the reason for the reasoning and advancement of the system. To acquire and keep up with upper hand, associations can profit with the structure's direction on the administration of information systems and data measures. The idea and structure open up new subject matters the executive's examination and issues that will be tended to and further researched.

Keywords: *Knowledge Management, Network, Data Insurance, Data Measures*

INTRODUCTION

In numerous examinations, it has been underscored that the organization's upper hand comes from its remarkable information and the manner by which it deals with that information (Nononaka and Takeuchi 1995; Boisot 1998; von Krogh and associates 2000a, b; Wikström and Normann 1994; Nonaka and Teece 2001; Nonaka and Takeuchi 1995). From certain perspectives, data replaces regular assets, cash and work as the main monetary asset in the post-mechanical information economy (otherwise called the data economy) (Drucker 1995). Somehow, associations are continually "in charge" of data, regardless of whether deliberately or purposefully. While the idea of coding, putting away, and sending data to associations isn't new, late changes in association and conduct have prompted more prominent accentuation on data move and maintenance. Reports of data the executives' frameworks (KMs) and execution of data the board frameworks (KMS) can be acquired. Aside from the way that we have numerous responses to the inquiry, "For what reason do firms put resources into data the executives and use KMS?" we have a couple of answers to the inquiry, "How might firms viably oversee information to work on vigorous execution?" We have a few thoughts, systems, and models identified with information the board (KM), yet there are significant holes in the information body rather than how you can acquire and keep up with upper hand through essential data the executives.

This paper has two principal destinations. First give subtleties. As a matter of first importance, data the board should be rethought. To figure the firm, it is important to grow both assets based and organization-based data. We likewise place data the board in network conditions and would contend that the different kinds of organizations ought to be the primary focal point of key data the executives. Second, we are fostering an essential information the executives system dependent on the reasonable structure we have grown up until now (SKM). SKM is an interaction that includes the accompanying advances: 1) vital vision, 2) information vision and key data recognizable proof, 3) development, 4) data assurance, 5) execution, and 6) data use. To acquire and keep up with upper hand, an association can profit with utilizing a system to help it with methodologies to oversee data and information measures. Likewise, thinking and structure recognize new spaces of examination and issues in data the board. In particular, our methodology is applied logical in nature (Järvinen 2000), which implies that we use past craftsmanship studies and hypotheses, models, and developments to work on our reasoning and SKM system.

In the accompanying segments, you will discover the layout of this paper: The following area makes way for a short conversation of data, data the board, and data the executives' frameworks. Following, there will be a show and conversation of another idea of data the executives. We present an essential data the executives system, in view of basic reasoning, and examine the jobs that ICT (data and correspondence innovation) can play in this cycle.

2. DATA, INFORMATION MANAGEMENT, KMS

It isn't new to consider associations places where data is coded, put away, and communicated; notwithstanding, ongoing advances in hierarchical and the board rehearses have made them more centered around information (California Management Review 1998; Truch et al. 2000). This segment presents a concise outline of a portion of the numerous educational thoughts examined in the writing and data frameworks, techniques, and hierarchical vision. This permits us to communicate certain (vague) thoughts regarding data and data the executives, which we can challenge. We likewise present data thoughts, data the board, and data the executives frameworks that will fill in as our beginning stage; in the accompanying segments, we will expand on these spaces. (No, we won't go into the contention that information the board is another idea or the restoration of old thoughts. KM is another idea, and accordingly, ground-breaking thoughts, ideas and strategies should be created. See the model Nonka and Takeuchi (1995), Alavi and Leidner (2001) , Alavi (2000), Spiegler (2000), Nonaka and Teece (2001), and Von Krogh and associates (2000a, b) discover contentions on the side of this view; for this situation we concur with these creators.)

The accompanying hypotheses of data (Alavi and Leidner 2001) are basically partitioned.

- The connection among data and information and data. A few creators, particularly those in the data innovation (IT) people group, have addressed the topic of clear information by making a differentiation between information, data and information (Fahey and Prusak 1998; Tuomi 2000; Spiegler 2000).
- Cognizance as a demeanor is characterized as "the state or truth of information," information is characterized as "the arrangement acquired through experience or study; the total or extent of everything procured, got, or contemplated" (Schubert et al. 1998).
- Data about data can be put away in files (authoritative recollections) and utilized as articles (object) (Stein and Zwass 1995; Wijnhoven 2000).
- Information as an interaction that includes knowing and doing at the same time (Brown and Duguid 2000).
- Information as an ability or asset, where data is viewed as a force or asset fit for working on the exhibition of an association (Carlsson et al. 1996; Meso and Smith 2000).

Because of alternate points of view on data, there are alternate points of view on data the executives and KMS jobs (Carlsson et al. 1996; Alavi and Leidner 2001). Contingent upon the RBV, we will begin with data as an expertise as our beginning stage. The principle justification this decision is that, in the different points of view accessible, this is the one in particular that addresses the connection between information, information the executives, and strong fortitude.

The resurgence of interest in hierarchical data has prompted the issue of data the board to support the association. Distinguishing and benefitting from individual and corporate data to assist the organization with becoming serious is data the executives (Davenport and Prusak 1998; O'Dell and Grayson 1998; Cross and Baird 2000; Liebowitz 1999). Data the board is tied in with recognizing and causing a benefit on individual and incorporated data to assist the organization with turning out to be more aggressive.

Data the board, as indicated by designs and sorts of associations like data frameworks, comprises of four arrangements of data frameworks for the general population, to be specific: 1) data creation, 2) data association and capacity/recovery, 3) data move, and 4) data use (Pentland 1995; Davenport and Prusak 1998; Boisot 1998). It is the reasonable and social idea of authoritative information, and its application to the arrangement and activities of people, that is, to incorporated practices (for example hierarchical) and societies addressed by designs and models. The four cycles don't address a bunch of solid capacities, yet rather an organization of associated and associated capacities.

As per Davenport and Prusak (1998), most data the board projects are intended to accomplish one of three objectives: To accomplish these objectives, associations should initially make data apparent and show the job of information in their tasks. They should then foster a culture of more information by advancing and coordinating practices, for example, data sharing and dynamic inquiry and data, and at last they should fabricate a data framework - an innovation framework, yet an interpersonal organization. Teece (2001) affirms that the "KM development" has three wide targets sought after by its individuals: the foundation of data files (information vaults), the improvement of "data" access, and the improvement of the information base, all things considered.

Hierarchical data the board frameworks (KMS) are a bunch of data frameworks used to oversee authoritative data and data. At the end of the day, it is data and correspondence innovation (ICT) programs intended to help and further develop the association's data building, stockpiling/recovery, transmission, and arrangement measures. Albeit not all data the board frameworks depend on data and correspondence innovation (ICT), just as admonitions focused on more noteworthy accentuation on data and correspondence innovation (ICT) by sabotaging the social and social designs of data the executives are remarkable (Davenport and Prusak 1998; O'Dell and Grayson 1998; McDermott 1999;), numerous KM programs depend on ICT as a key facilitator. Records on the utilization of data and correspondence innovation (ICT) in the association's data the executives frameworks distinguish four normal applications: Best practices are incorporated and shared, and organization data frameworks are made, for example, data organizations, and information based dynamic and activity dependent on information. . The KMS is certainly not a particular ICT in the conventional sense, yet rather a dream (point of view) in data the board, the job of data and correspondence innovation (ICT) as the reason for data the executives, and how to apply this thought. There is a spot for variety of thoughts in data the executives, and there is likewise a spot for variety of thoughts in data the board frameworks. Following the dispatch of the SKM system, we will momentarily examine the different jobs that can be played by data and correspondence innovation (ICT).

In synopsis, these reports diagram the numerous explanations behind data the board, articulate alternate points of view on data, clarify KM and KMS practically speaking, and clarify the different capacities related with data the executives. There is little exploration on how firms can adequately oversee data to acquire and keep up with upper hand. We will do this in the remainder of the paper, which will begin with the organization's asset based (RBV) viewpoint as a beginning stage.

3. CHANGE OF INFORMATION MANAGEMENT SYSTEM.

The epistemological reason for the data the executives we bring is found in the field of business procedure hypothesis. It depends on the development of asset-based perspectives (RBV) and corporate-based visuals (KBV), separately. RBV's moderate idea that cutthroat benefit depends on significant and novel interior assets that contenders are hard to copy at a sensible expense. On account of KBV, assets are those identified with information and learning. In tending to the job of assets on which item/administration highlights are based, RBV and KBV expect to characterize and incompletely anticipate the organization's market execution by taking a gander at the job of assets on which item/administration highlights are based. RBV got a negative reaction. When alluding to RBV, for instance, Teece et al. (1997) express that it perceives however doesn't endeavour to clarify the components - dynamic powers - that permit firms to keep up with their upper hand. Furthermore, late exploration recommends that an organization's unfamiliar relations organization could be a significant wellspring of corporate rivalry (Gulati et al. 2000; Nohria and Ghoshal 1997).

Data the board (KM) can be drawn closer by key, with data oversaw as a wellspring of procedures. The methodology is about the drawn-out course and extent of the organization's activities, and the hypothetical technique is tied in with getting sorted out the main authoritative assets for senior administration, and for anybody with an interest in the reasons for progress or disappointment inside associations (Rumelt et al. 1994; Johnson and Scholes 1997). Subsequently, adopting an essential strategy to data the executives require resolving two issues: 1) vision and course, and 2) how to design and oversee data related assets to acquire upper hand. In a setting where we accept that data and information measures are basic, reasonable, and viable contemplations in essential data the board should address how significant parts of information the executives and data frameworks can prompt upper hand.

This segment will give itself to the issues referenced above, specifically: 1) powerful energy, which is an augmentation of RBV; 2) the extension of RBV to incorporate outside associations as a wellspring of upper hand; 3) networks as the setting of data the board; and 4) general key data the executives structure.

3.1. EXTENDING RESOURCE BASED INFORMATION AND INFORMATION SYSTEMS

Business and modern data resources that are hard to repeat are a wellspring of long-haul upper hand for business associations in the "new economy." The development, proprietorship, assurance, and utilization of such resources give an upper hand to business elements in the "new economy" (Teece 2001). As of late, essential archives have seen the development of the organization's information-based vision (KBV) (Grant 1996a, b, 1997; Spender 1996a; Cole 1998). As per the organization's asset-based point of view (RBV), which was first upheld by Penrose (1959) and later created by Wernerfelt (1984), Barney (1991, 1995), and Conner (1999), this thought constructs and extends the organization's RBV (1991).

They attest that the administrations given by unmistakable assets rely upon how they are incorporated and used, which is an element of the organization's information base (i.e., information). Notwithstanding the individual workers, this data is installed and communicated through different designs like the way of life and personality of the association and its practices and arrangements. It is likewise communicated through PC based data frameworks and archives (Grant 1996b; Nelson and Winter 1982; Spender 1996b; Boisot 1998). To some degree since data related assets are by and large hard to duplicate and are unpredictable in the public arena, KBV accepts that these data resources can possibly create long haul upper hand. Notwithstanding, the restricted information accessible at some random time is the organization's capacity to effectively deal with new data and utilize existing information to tackle issues, decide, and make strides that fill in as the reason for beneficial rivalry - as per the World Economic Forum.

Two confirmations were performed by RBV. In the first place, there are asset imbalances, which implies that assets and abilities can be conveyed independently between contending firms. Another thought to consider is the failure of assets to move, which implies that distinctions in assets and energy can stay stable over the long haul. With regards to the organization's assets and abilities, this incorporates any monetary resources, HR, unmistakable resources, and authoritative resources utilized by the association to create, produce, and convey administrations and items to its clients.

There is no lack of meanings of administration includes that give upper hand. A couple of the most as often as possible referenced assets highlights, as per Kalling (2000), incorporate the accompanying: they ought to be 1) significant, 2) unmistakable, 3) subject to flaw and vulnerability, 4) expensive to copy, and 5) disseminated all the more proficiently in the association.

1. Cost. The instrument should empower the organization to react to ecological dangers or openings in an assortment of ways, like diminishing expenses or expanding the cost of an item or administration, or by isolating an item or administration from its rivals.
2. Merciful or effectively open The gadget should be one of a kind and have an inconsistent dissemination to all rivals to give upper hand.
3. There are contrasts in value and assumptions. Various assumptions for future ware esteem are firmly identified with the issue of evaluating in any case. Seen according to SKM's point of view, this is identified with the normal sum that specific data related sources will bring to the association.
4. Modest thumping. The application should be difficult to repeat to acquire and keep an upper hand. It is important to give assurance against future duplication of material. Subsequently, organizations lacking assets or limit face higher securing costs contrasted with existing firms.
5. Arranging and using assets. This component is identified with how well the application is arranged and how well the application is appropriately overseen. Thus, it is related with authoritative construction, measures, etc to guarantee that the asset is completely used.

Most RBV archives are worried about stable assessments that are troublesome, if certainly feasible, to copy. Flexibility of assets has as of late been considered by numerous creators (Grant 1996a, b, 1997; Teece et al. 1997 ;: Kogut and Zander 1992; Eisenhardt and Martin 2000). This can be viewed as an expansion of RBV and KKV as far as execution. This expansion is significant according to SKM's perspective since it will drive us to zero in on the incredible parts of information and data measures, which are at present ignored. We likewise see an expansion in the quantity of cases wherein market rivalry is eliminated from market contest (Teece 2001). As indicated by Teece (2001), "instalments from market understanding Insights are high with regards to think about where the market is going and contributing intensely to be quick to arrive. Having the option to distinguish and take advantage of such lucky breaks is an ability that associations have. "This expertise is alluded to as powerful energy and alludes to the adjustment of center - the change of insightful units and plan units - that happens during work (Teece and Pisano 1994; Teece et al. 1997; Teece 2001; Eisenhardt and Martin 2000). While assets are the principle focal point of RBV, cycles, positions, and techniques are the fundamental focal point of the powerful energy vision. Teece and partners (1997) characterize dynamic potential as "... the organization's capacity to incorporate, form, and redesign inside and outer abilities to react to quickly changing conditions ..." intensity with regards to advertise patterns and market positions. " thus, benefit is acquired not just from the organization's resource building and the degree of impersonation, yet in addition from the organization's capacity to upgrade and change its plan of action.

Our reasoning is essentially founded on RBV and KVB, however has been significantly improved by the consideration of the idea in powerful energy. Coming up next are instances of how to get and keep an upper hand in data the board:

- Building data measures (data creation, data association and capacity/recovery, data move, and data use) are significant.
- "Planning" instruments and strategies for overhauling, upgrading, and changing information-based cycles.
- Data Management in Networks (otherwise called Knowledge Management in Networks)

These are the second and third augmentations, identified with: 1) moving from a solid highlight a solid and mid-solid viewpoint, and 2) putting incredible accentuation on networks as the setting of data the board.

An article distributed fifteen years prior by Thorelli (1986) underlined the significance of organizations and the need to proceed with research on network power. To depict the relationship that exists between at least two associations, Thorelli utilized the expression "organization." Some writers have utilized this term to allude to both inward and outer organizations in their composition. To summarize the definition given by Laumann and partners (1978): An informal community is characterized collectively of spots (e.g., people or associations) associated by a gathering of social connections (e.g., kinships, moves or separation) of a predetermined sort. "In data the executives, the correspondence organization will serve principally as a method for enabling and supporting different data the board measures. The utilization of data and correspondence innovation (ICT) can permit and work on the organization.

Notwithstanding the way that a "network" of development can be utilized to characterize a visual example, we propose that it be utilized with regards to vital information the executives. If proficient organizations acquire and keep an upper hand over data the board, we accept that data the executives should zero in on network. There is proof to help this idea in numerous incredible investigations. Von Hippel (1988) found that providers and clients were the main wellsprings of novel thoughts for new authoritative items and administrations. An organization with phenomenal data moves between clients, makers, and suppliers will set up networks with wasteful data sharing administrations, as per von Hippel. In an examination directed in the biotechnology business, it was tracked down that an organization of firms, instead of individual organizations, is a wellspring of development (Powell et al. 1996). Utilizing Toyota for instance, Dyer and Nobeoka (2000) showed that the organization's capacity to viably oversee and oversee data sharing organizations is basically important for the item benefits Toyota and its providers appreciate. As indicated by Liu and Brookfield (2000), Taiwan's proficient hardware gear industry has a wide scope of organization segments. They likewise tracked down that the achievement of the instrument business could be expected to some extent to the presence of organizations. These and different examinations (e.g., Miles et al. 2000; Boisot 1998) show the significance of organizations and that organizations can work viably in all data handling exercises (from data creation to data preparing and use).

New hierarchical structures have been proposed, and a considerable lot of these stress the significance of utilizing networks in data and creative cycles - see, for instance, Nononaka and Takeuchi (1995), Quinn (1992), Quinn et al. (1997), just as various commitments to Nohria and Eccles (1998). New sorts of association have likewise been proposed, and a significant number of them underline the significance of utilizing networks in new data cycles and cycles - see, for instance, Nononaka and Takeuchi (1995), Quinn (1992).

We order three sorts of data the executives organizations: 1) Intranetworks, 2) extranetworks, and 3) online exercises. Intranetworks are those inside an association. Intra-network networks are clear organizations, which implies they don't cross the association's limits. It tends to be a Lotus-based intranet determined to spread great practices all through the association.
Extra organizations are outside the constraints of a solitary association. Organization cooperation is denied, which implies that people and gatherings partnered with specific associations are permitted to take an interest in exercises. For instance, a few broadcast communications organizations engaged with the improvement of Bluetooth applications might have an extranet for their innovative work staff. Between networks are likewise networks that surpass the constraints of individual organizations; however support isn't restricted to those in the organization. They are exceptionally open to any individual who wishes to join and take an interest in the exercises they offer. For instance, Fiat has utilized the Internet to test ground-breaking thoughts for the plan of its Punto, which has prompted an effective result. Fiat has welcomed expected clients to partake in online exercises, for example, choosing vehicle things on the organization's site. More than 3000 individuals partook in the change and furnished Fiat with key development data - this

is a phenomenal illustration of coordination through the between network. (Despite the fact that we have utilized models dependent on data and correspondence innovation, not all organizations will be founded on ICT, and in many organizations, ICT will be one of the segments and highlights.)

Our reasoning brings up new examination issues in the field of data the executives, for example,

• In what circumstances are different interchanges compelling in the field of data the board? There are three sorts of fundamental organizations, as per Liu and Brookfield (2000a), in particular: implanted organizations, dispersed organizations, and exceptionally focused organizations. They discover various sorts of organizations inside the fundamental kinds they find. This division can be utilized related to the recently referenced contrasts (intra-networks, and so forth)

• Networks with solid members contrasted with frail wired organizations It has been recommended in certain investigations that profoundly associated, solid associations are more powerful in scattering data than building new data, which is the strength of tie ties (Rowley et al. 2000; Dyer and Nobeoka 2000). It is important to lead research in circumstances where solid unbending nature organizations and powerless tie networks work in data frameworks.

The issue with extra-organizations, and particularly between networks, is that much of the time there could be no more significant position power to plan a "hierarchical" plan, which makes a test. It is likewise important to investigate how these kinds of organizations can be fabricated and utilized successfully.

• From an administration and plan point of view, we can recognize: 1) fake (planned) networks, 2) normal and arising organizations, and 3) different organizations. Instances of planned organizations incorporate the arrangement of an electronic correspondence organization, which might incorporate the utilization of Lotus Notes, or the development of a data set, which might remember the enrolment of best practices for lab testing. Be that as it may, the development could likewise incorporate the advancement of motivating forces and instructive projects, just as the development of substantial gathering places. A few organizations create and arise normally inside and inside associations, while others are worked because of a causal cycle. As per the discoveries of von Krogh et al. (2001), firms can and should find ways to make data building and partaking in the association. Gupta and Govindarajan (2000) call attention to that the turn of events and backing of dynamic social biology is a fundamental prerequisite for viable data the executives. The social climate is characterized as the social climate wherein individuals work and is created and upheld by the association. As indicated by Liu and Brookfield (2000), relationship improvement and the foundation of trust are fundamental for useful organizations. Examining how an organization can take part in the mix of coordinated ecological organizations is another significant examination question.

In rundown, we accept that the most suitable conditions for data the board ought to be those of organizations. This will have benefits in data the executives examination and data the board conduct overall. Aside from the way that hypothesis and observational investigations support this proposition, we actually need a ton of exploration in the spaces and issues referenced previously.

4. VITAL MANAGEMENT: MANAGEMENT FRAMEWORK

The five asset credits, every one of which, when met, give the organization an upper hand, talked about over, all taken from RBV. Thus, an essential asset the executives asset based vital administration structure should help the association in carrying out these highlights. This implies that the structure should direct the association through the accompanying advances: 1) recognizing proper data and information measures, 2) creating and refining data and information cycles to expand esteem, 3) carrying out and spreading data and data frameworks adequately; and 5) to ensure data and information measures.

As per Kalling, our structure is part of the way dependent on the system of IT asset the board frameworks that he has created (2000). You fabricate a structure based on the organization's leftover worth. As well as zeroing in on data and information measures, we have changed and extended Kalling's system by: 1) fusing dynamic establishments, 2) underlining networks (inward, reciprocal, and moderate organizations), 4) renaming different capacities, 5) orchestrating the substance of assignments straightforwardly to the assets and cycles identified with the data, and 6) to add a solitary capacity (vital thought).
As per SKM's proposed system, the securing and maintenance of upper hand through information and data measures is a cycle that incorporates (Figure 1): 1) vital vision, 2) vital information and basic data distinguishing proof, 3) structure, 4) data assurance, 5) execution, and 6) The utilization of data and information measures In request to acquire an upper hand through information and data measures, an organization should oversee six distinct activities simultaneously. Different targets and issues are related with each assignment, and numerous appraisal issues are related with each errand.

As indicated by RBV, Barney (1997) made four inquiries that could be posed about any asset or ability to decide if it very well may be a wellspring of upper hand. The accompanying inquiries emerge because of adjusting the inquiry to our reasoning:

• The topic of why something is significant. With regards to regular freedoms and dangers, does authoritative data and organization-based data frameworks empower the association to recognize and abuse those chances and dangers?

• The issue of simple access is being created. Is it conceivable to appraise what number of contending firms as of now have some significant data and organization-based data measures?

• whether or not something can be replicated or not. Contrasted with firms that have some important data and cycles dependent on network, do firms that don't have that information and cycles face more prominent trouble in acquiring such data and cycles?

• The issue of hierarchical design. Is the organization association with the goal that it can completely use the serious force of its information and organization-based data measures?

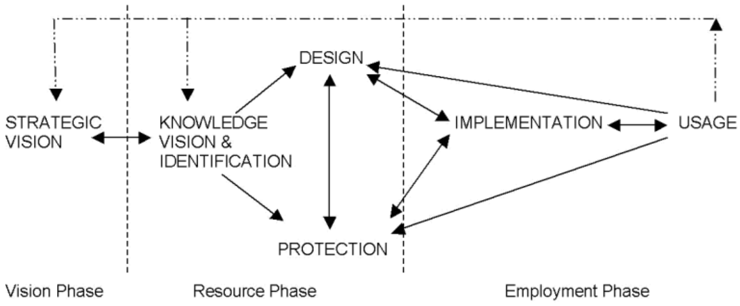

***Figure 1**: A model of the strategic knowledge management process*

A dream for what's to come. This is like what is known as "conventional" arranging. The essential vision might incorporate the accompanying: a) corporate mission, which is the main goal as far as costs and assumptions for different partners, b) vision or objective, which is the ideal future situation, which might incorporate firm aspirations, c) objective, which is a typical mission statement or reason; d) targets, specifically measurement and execution or explicit strategy explanations. Notwithstanding the system in question, it ought to, from an essential information the board point of view, distinguish key data the executives as basic components for the association to acquire and keep up with upper hand. The fundamental reason for key data the board will be recognized in the essential vision text. On the off chance that essential data the executives isn't viewed as a basic apparatus, associations can all the more likely advantage by zeroing in their endeavors on different assets. The arrival of this capacity is utilized as a contribution for the survey work, portrayed beneath.

Understanding the situation with data and recognizing key data related assets An information point of view is required for an organization to oversee data related assets in an adaptable and economical way. The authoritative vision ought to be in accordance with the hierarchical key vision. It should show how the organization, through the administration of data systems and cycles (network-based), can accomplish its vision of accomplishing its objectives and goals. Because of its relationship with key viewpoint, the information point of view can possibly rise above the limits of existing information, items and administrations, hierarchical constructions, and markets.

We can pose the accompanying inquiries dependent on the responses to the above questions:

• Is it conceivable that some type of organization-based data and cycles will be helpful to the organization? The worth of a resource ought to be evaluated as far as essential viewpoint.

Would you be able to advise me if contending firms have some sort of data and cycle data dependent on the organization you need?

• Can firms that don't have this specific kind of data and organization-based data measure be more cutthroat when they attempt to procure them contrasted with the organizations they have?

• Is it conceivable to plan and utilize an assortment of workmanship objects, fake frameworks, physical and virtual spaces, and different materials to exploit the cutthroat force of specific kinds of data and organization-based data frameworks, for instance?

Requests will help the association in deciding the likely aggressive effects of particular sorts of data and organization-based data frameworks (absence of rivalry - > progressing upper hand) by posing proper inquiries. It will likewise give a sign of conceivable monetary execution (beneath ordinary to better than average, for instance).

Therefore, the data viewpoint determines what data related assets the firm ought to create to acquire upper hand in data the executives, yet it doesn't indicate how these data related assets ought to be planned, procured, and utilized.

Plan. Configuration work is tied in with deciding how needs (from past work) can be met. Configuration is about the entire substance and interaction. As well as planning files, business cycles and thorough data the executives, reward frameworks and other such projects, development can likewise incorporate planning spaces like structures and different designs (Earl and Scott 1999; Brown and Duguid 2000; Hansen et al. 1999; Nononaka et al. 2001; von Krogh et al. 2000a; Gupta and Govindarajan 2000). This may likewise remember the development of visual regions for use for reproduction programs (Schrage 2000). The undertaking considers the development of the capital, yet in addition the advancement of human resources. It includes constructing how data can be utilized to develop or upgrade other existing (key) assets that can be wellsprings of upper hand, for example, fabricating how data can be utilized to foster new item advancement measures (NPD measures).

At the core of the plan is the development of an essential information structure, comprising of a bunch of information related assets that cooperate to make the possibility of information work. The accompanying inquiries can be utilized to test make-up:

In particular, how much and how much are the absolute generally significant (network-based) measures - significant as far as information viewpoint and vital point of view, to explain?

• Do contending firms have explicit plan techniques (network-based) that they can use for their potential benefit?

• Can firms that don't have a particular data measure (network-based) plan hazard an upper hand when attempting to obtain them contrasted with existing firms?

When and how much will it be feasible to utilize an assortment of artistic expressions, creation frameworks, visual guides, and visual spaces, in addition to other things, to exploit the serious force in a specific industry?

Information assurance is significant. The fourth undertaking is momentarily talked about in the data the executives writing. With regards to information assurance, there are two primary targets: 1) insurance from impersonation, and 2) security from value disintegration. Except if the firm can utilize authoritative and legitimate security measures at times, for some, data related assets, it can just depend on disconnection systems to ensure its most significant data related resources. Strategies for separation might incorporate, for instance, the accompanying: • Uncertainty The topic of "obscuring" the connection between a data related gadget, for example, an ICT-based organization-based data framework, and the aftereffects of that source.

• Complexity. The "inserting" inquiry is a data related application as in it catches parts of an unpredictable social circumstance, for example, an organization-based data measure, for instance.

• The magnificence of time. Attempting to be above all else in creating data related assets (which are exceptionally managed by contenders) is imperative to consider in this specific situation, which is identified with the unique capability of the organization.

These strategies can make it hard to reproduce and can assist with lessening esteem disintegration. Second, it is feasible to utilize inquiries to survey: 1) regardless of whether certain actions taken to ensure protected innovation and data cycles might bring about upper hand; and 2) diverse plan strategies from the review point.

Execution. The business stage trails the assets stage. It isn't sufficient to distinguish and plan data related assets in an inventive manner. As a rule, different mediations are required all together for the data and cycles of organization-based data to be completely used. You could utilize another award framework, just as learning and learning programs, in addition to other things. Questions might be utilized to investigate diverse execution systems relying upon their cutthroat results and monetary execution.

Use. This is the real utilization of data and organization-based data measures in true circumstances. Questions can be utilized to test the consequences of real utilization of data related assets. They are not intended to be awesome. The test outcome can affect both an essential viewpoint and an information point of view.

4.1 Outcomes of Information and Communication Technology (ICT) Information Management

As referenced before, KMS is anything but a particular data and correspondence innovation (ICT) innovation in the conventional sense, but instead a thought (perspective on) data and information measures, the job of data and correspondence innovation (ICT) as a help for data the executives, and how to apply this idea. The Internet, intranet, groupware, and PC related associations, information warehousing, information securing of data sets (counting information mining), yellow PC based pages, recreation apparatuses, keen specialists and video conferencing are only a couple instances of ICT that can be utilized for data the executives in network conditions. This is not a thorough rundown, notwithstanding. (1999), Alavi and Leidner (2001), Carlsson et al. (2000) gave instances of different parts of the utilization of data and correspondence innovation (ICT) in data the executives.) We have talked about a similar idea of data the board the executives and the SKM system in the past segment. This can be utilized to recognize and investigate the possible job of data and correspondence innovation (ICT), and how ICT can be utilized on intra-, extra-, and different organizations to acquire and keep up with upper hand. The utilization of data and correspondence innovation (ICT) in network-based data frameworks requires critical exploration consideration.

5. CONCLUSION AND OBJECTIVES OF FUTURE RESEARCH

We have grown new information thoroughly considering reasonable examination. Contingent upon the RBV and KBV of the firm, we have extended our intuition to incorporate the accompanying thoughts: 1) the idea of dynamic energy; and 2) a solid and in the middle of view. An essential data the executive’s structure was likewise presented, just as the presentation of organizations as a setting for data the board. A structure might be utilized to direct the association through the way toward building and creating efficient data frameworks. To make thinking and system more precise, more hypothetical work is required. Exploratory examination will be significant in assisting us with seeing how firms can become capable in data the board in network settings, how they here and there stay that way, how they further develop their data the executives, and why data the executives can at times disintegrate in network conditions.

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SOCIAL IDENTITY AND WOMEN EDUCATION: AN EMPIRICAL STUDY ON IMPACT OF MANAGEMENT EDUCATION ON SOCIAL IDENTITY OF WOMEN

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ABSTRACT

Retrospection into the history of human civilization highlights its evolutionary process, varied challenges faced by this species against all odds and its struggle to establish a unique supremacy status over other species on the earth. Contributing factors for the said supremacy are their unparalleled intelligence, broad knowledge base and profound experience. Education considered to be an effective tool in bringing the required awareness in an individual. On the flip side, from ages, male-dominated societal structures across the globe have led gender discrimination in many walks of women's life. Thus, it demands an insightful approach towards understanding the impact of Management Education on Social Identity of Women. The results reveal that management education resulted in the upliftment of women in terms of their economic and social status compared to non-management graduates. A clear positive linkage was observed between women empowerment through management education and their employability, gender inequality, social status, and work-life balance.

Keywords: *Women empowerment, Social Identity, Gender Equality, Quality Education, Management Education*

INTRODUCTION

Mr. Nelson Mandela quotes how education is one of the most useful tools and rightly highlights the spirit of education in the context of today's world where we are facing various problems ranging from poverty to terrorism. Mankind has evolved over the period of time by learning from the surroundings and adapting to the changing environment if one has to understand the significance of learning or gaining knowledge the current advancement of mankind would be the right example. One of the most important advantages of education is that it builds awareness in an individual about self and surroundings. If one is educated he/she will be aware of their rights, laws and their responsibilities towards society thus leading to social harmony and peace.

In all religions, women have been given a special and sacred status, but if we look around, we may doubt the status quo. "Religion and customs always had been the strong influencer in the making of Indian society, irrespective of educational literacy even today a lot of customs are followed without any practical consideration. Girls are likely to get married at the early tender age of 18 years even today in countries like India.

"Poverty is one of the major reasons for the intermediate withdrawal of children in schools. Parents find it difficult to understand the cost-benefit of educating their child especially girl children, against the extensive child labor market. Thus schooling becomes an opportunity cost for parents, in extreme situation the girl child has to sacrifice the schooling to take care of domestic responsibilities like cooking, taking care of a sibling, etc.

Various scholars have highlighted different areas in which women should get equality like, education, marriage, inheritance, politics and employment. Women empowerment is a real concern and that's why it has been a priority in the agenda of various stakeholders in the government as well as the non-government organization. Over the period education has shown a positive effect on various social aspects in general. "Men & Women should get the education they rightly deserve, and it should be provided regardless of their gender.

This paper explores the impact of management education on the social identity of women with special emphasis on Rashtrasant Tukdoji Maharaj University. The purpose of this was to ascertain the reasons behind the social development of women and its correlation with management education.

REVIEW OF LITERATURE

Moser(1989) defined empowerment as the capacity of women to increase their own self-reliance and internal strength. It helps women make choice with better confidence and ability to gain control over the material and non-material resources. Women empowerment have always been associated with basic ingredients of Education, Economic Freedom, Social Representation, but it may also be important to understand if they have any interdependency on each other and thus influencing the empowerment of women.

Acharya & Ghimire (2005) have highlighted the different dimensions of women empowerment and proposed that these dimensions have interdependency on each other. There are THREE dimensions to women empowerment process i.e: Economic, Social & Political, all dimensions have interdependency and strengthen each other.

Jones-Deweever A (2012) has addressed the issue of women education in one of the international conferences, where she related education of female gender with various social, economic and personal benefits. "True empowerment of women would be to provide full access to education, health care facility, employment and participation in political activities without fear of violence or cultural backlash of any sort from any section of the society.

Dr.Kumar J and Sangeeta (2013) in their research have studied the importance of education and how it helps a girl child growing further in matured women thus helping them to build a respectful image within the family as well as in the society. Girl education is the most powerful tool to bring positive change in the society. Education helps to bring reduction in inequalities and functions as a means of improving their status within the family.

Mukherjee D (2007) has rightly highlighted the positive effects of education considering various social parameters like birth rate, death rate, infant mortality rate and population growth rate. Social phenomenon like Birth Rates (CBR), Death Rates (CDR), Infant Mortality (IMR), and Population Growth Rates (PGR) decelerate with improvements in literacy and thus it can be said that literacy has wide socio-economic impact.

Blustein D & Noumair D (1996) in the research work have tried to review work carried on the self and identity, to develop a means of integrating these bodies of work with contemporary issues in the theory and practice of career development and to provide a theoretically informed discussion about the implications of recent innovations in conceptions of the self and identity to counselling practice. The study concluded that embedded view of the self and identity provides a means of understanding the increasingly complex network of factors that influence the development and expression of those concepts.

Cameron J and Lalonde R (2001) in the research the nature of women's and men's gender-derived social identification was examined with focus on the relationships between aspects of identity and gender-related ideology. Researcher concluded that factor analysis provided support for a multidimensional conception of gender-derived social identification, with viable subscales reflecting in-group ties, cognitive centrality, and in-group affect.

Dovidio J, Gaertner S, Pearson A and Riek B (2005) in the research work have reviewed how social identity and social categorization impact people's responses to others and personal well-being. Researcher concluded that people belong to many different groups, and these social identities can become activated simultaneously. Meanings of social identities have difference implications for members of different groups.

Shore B (2005) an article focusing on women participation in MBA program has highlighted few areas how women can be motivated to participate in big number for better gender inclusion in future.

Churchard C (2010) has highlighted different initiatives which may help promote women in business. Different measures are required to promote more and more of women as Directors on boards, one of the key measures would be to attract more and more women in pursuing MBA courses.

Simpson R, Sturges J, Woods A and Altman Y(2003) in their research have analyzed career benefits from MBA. Important benefit of MBA was greater marketability, enhanced job prospects, enhanced salary or status and enhanced credibility and confidence. Important skills gained from MBA are ability to handle and analyze complex data and negotiation skills.

RESEARCH METHODOLOGY

I have used Descriptive Research to understand different aspects in relation with education as a tool in bringing Women Empowerment. To achieve the required results, it was important to reach out to TWO different categories of respondent's i.e: Management Graduates and Non-Management Graduates.

For the research purpose only the Degree Course of Management offered by Rashtrsant Tukadoji Maharaj Nagpur University (RTMNU) i.e., Masters in business administration (MBA) has been considered as the criteria to shortlist the respondents. Thus, MBA was the natural choice, since it is governed by the University having standard syllabus and inputs as part of the curriculum avoiding any deviation from standard.

As I have used survey method in my research work, it was clear that a questionnaire would be required to capture primary data and achieve the desired outcome to facilitate the data analysis and further interpretation. Data captured through pilot study was entered into SPSS and was further tested.

Based on the research objective it was important to figure out the different constructs associated with the dependent variables of Social Identity.

Table 1

Variable	Construct
Social Identity	Pride
	Self-Esteem
	Well-Being
	Self-Efficacy

H1 Management Education has positive impact on Social Identity of women

H1A Management education has positive impact on Self-Esteem of women

H1B Management education has positive impact on Well-Being of women

H1C Management education has positive impact on Pride of women

H1D Management education has positive impact on Self-Efficacy of women

Based on inputs received from literature review it was decided to use independent t-Test to achieve the resuts of research.

RESULT ANALYSIS

Table 2

Demographic Variable	Number of Respondents		Percentage	
	MBA	**Non-MBA**	**MBA**	**Non-MBA**
Age Group				
20 – 25	**117**	**125**	**33.42**	**35.71**
25 – 30	**208**	**211**	**59.42**	**60.28**
30 - 35	**25**	**14**	**7.14**	**4**
Marital Status				
Married	**207**	**267**	**59.14**	**76.28**

Unmarried	**143**	**83**	**40.85**	**23.71**
Graduation Details				
B.A	**47**	**79**	**13.42**	**22.57**
B.B.A	**77**	**0**	**22**	**0**
B.C.A	**0**	**52**	**0**	**14.85**
B.Com	**85**	**83**	**24.28**	**23.71**
B.E	**53**	**44**	**15.14**	**12.57**
B.Sc	**88**	**92**	**25.14**	**26.28**
Type of Family				
Joint	**151**	**208**	**43.14**	**59.42**
Nuclear	**199**	**142**	**56.85**	**40.57**

I feel good about myself

Table 3

	SD	**D**	**UD**	**A**	**SA**	**Total**
MBA	0	0	69	193	88	350
Non-MBA	0	0	96	214	40	350

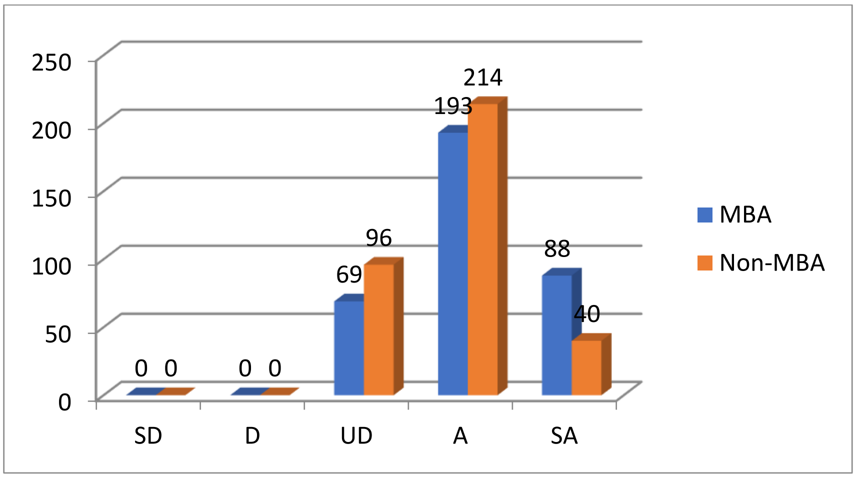

Figure 1

Majority of the management respondents believed due to their management qualification; it has provided them strong foundation for better career prospects and social identity. Education is one of many aspects for an individual to feel good about oneself. Management education, which is considered to a business degree, provides tremendous emphasize on business skills development. It helps build confidence in an individual, which otherwise is not generally done by other streams of education.

Many people respect me

Table 4

	SD	**D**	**UD**	**A**	**SA**	**Total**
MBA	0	41	92	148	69	350
Non-MBA	0	96	81	133	40	350

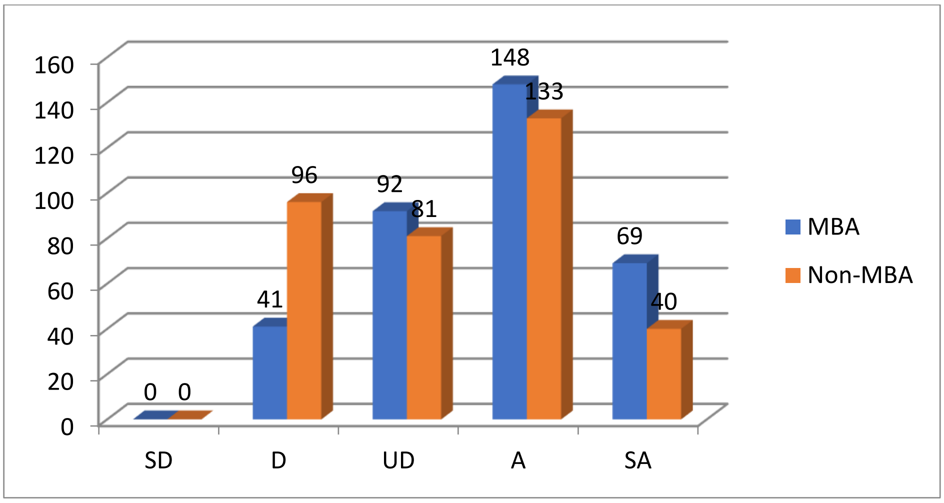

Figure 2

Based on the interaction it was also understood that management respondents were more involved in team and people management giving them the extra edge as compared to non-management respondents who were more involved in operational work. Management education emphasizes on business skills as compared to other streams of education.

On the whole I'm satisfied with myself

Table 5

	SD	D	UD	A	SA	Total
MBA	0	31	26	180	113	350
Non-MBA	0	99	69	132	50	350

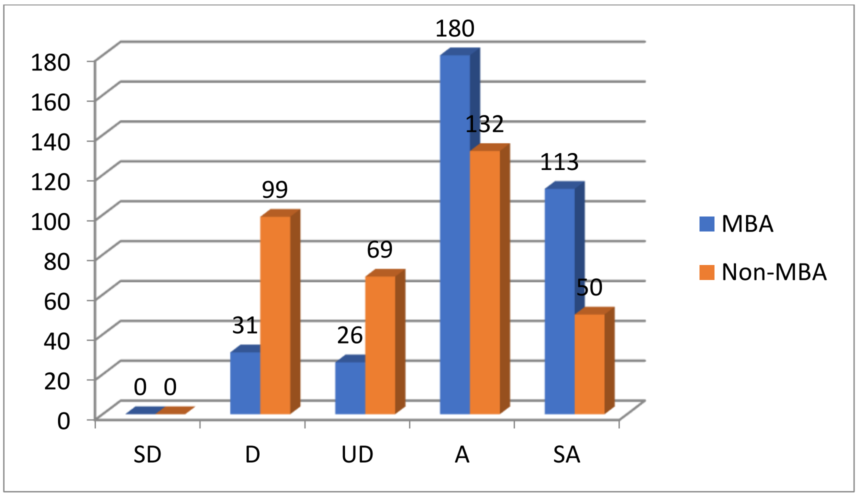

Figure 3

Based on the interaction with respondents it was observed that in general both type of respondents had positive feedback to the statement, but non-management respondents felt that they might have achieved more in terms of education, compensation, career growth as compared to management respondents. Respondents believed they are definitely satisfied with themselves, but they had aspirations to achieve more, and it would have been possible with better skills, training and career opportunities. Thus, it was clear that management education provided an edge over non-management education.

I feel that I have number of good qualities

Table 6

	SD	D	UD	A	SA	Total
MBA	0	0	26	222	102	350
Non-MBA	0	0	109	171	70	350

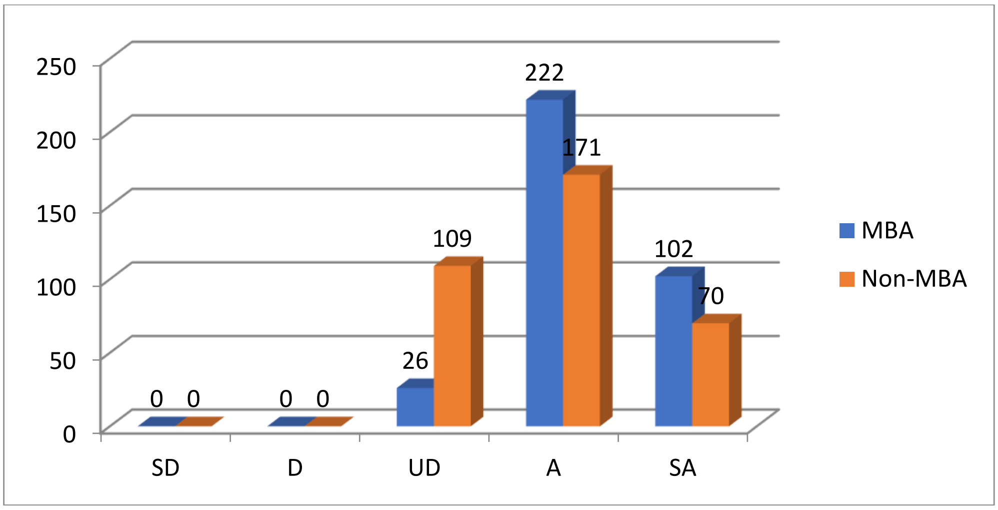

Figure 4

Based on the interaction with respondents it was understood that both respondents had agreement with the statement, but they had their own aspirations to achieve. Non-management respondents believed they do have good qualities but as compared to management respondents they were not provided any special training on different life-skills like team management, conflict management, behavioral training, time management, etc. which made them felt that they had much more to be achieved. Difference in the skills possessed by the respondents made them give a mixed reaction to the above statement. But in comparison it is obvious that management respondents were in majority agreement to the statement.

I am able to do things as well as most other people do

Table 7

	SD	D	UD	A	SA	Total
MBA	0	26	19	231	74	350
Non-MBA	0	72	120	127	31	350

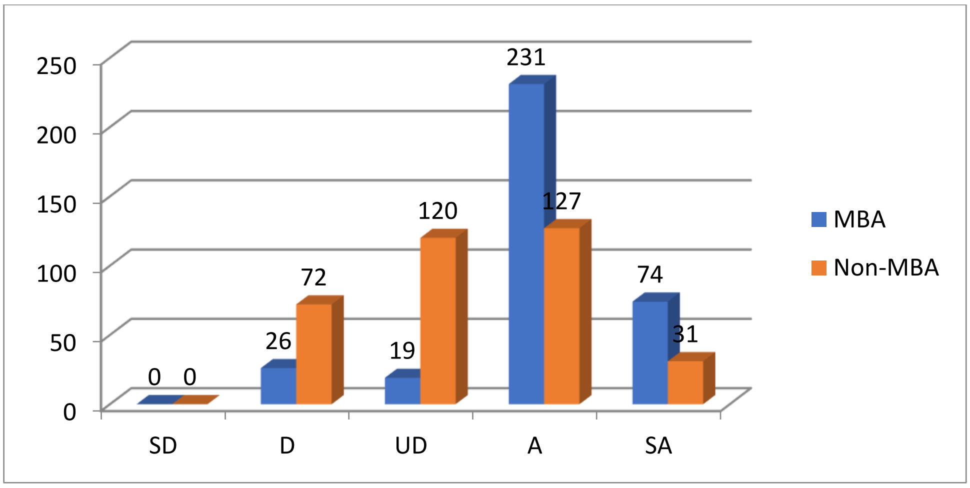

Figure 5

Management respondents in majority have agreed with the statement and the basic reason was that they were trained for various skills during their MBA program which can help them achieve higher efficiency at workplace. Non-management respondents too believed they have basic employability skills, but major of the learning happened on Job which may have consumed more time to prove their efficiency. Whereas management respondents possessed majority of the business skills which gave them the edge to perform and deliver immediately in their respective job roles.

I take a positive attitude towards myself

Table 8

	SD	D	UD	A	SA	Total
MBA	0	0	26	250	74	350
Non-MBA	0	48	77	201	24	350

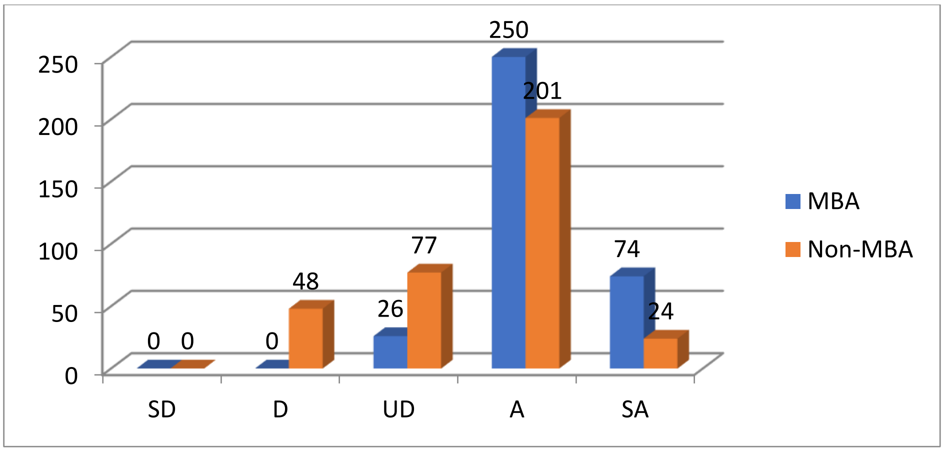

Figure 6

Based on interaction with respondents it was observed that management respondents had strong agreement with the statement as compared to non-management respondents. It was found that the major difference in the thought process was because of difference in business skills possessed, career prospect, designation, compensation and respect commanded in the personal and professional life. Non-management respondents were of the opinion that they too felt positive about self but had many things to be yet achieved in life.

The conditions of my life are excellent

Table 9

	SD	D	UD	A	SA	Total
MBA	0	26	35	220	69	350
Non-MBA	0	48	171	119	12	350

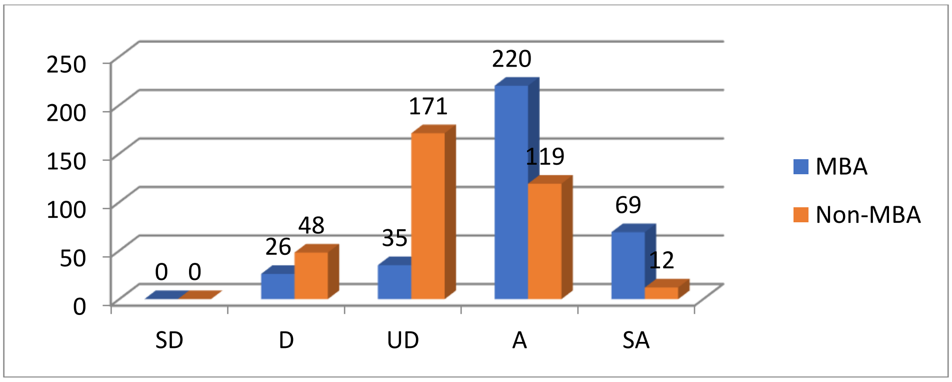

Figure 7

Based on the interaction with respondents it was observed that management respondents were in strong agreement as compared to non-management respondents. Respondents responded to the statement based on their personal and professional experience. In personal they felt that they were getting good respect, were part of family decision making and in professional life it was good job role and responsibility, clarity on career path, stability in career, etc. Whereas non-management respondents were of the opinion that there existing status is not bad, but they had aspirations to improve it and take it to the next level.

I am satisfied with my life

Table 10

	SD	D	UD	A	SA	Total
MBA	0	24	120	66	140	350
Non-MBA	0	75	120	129	26	350

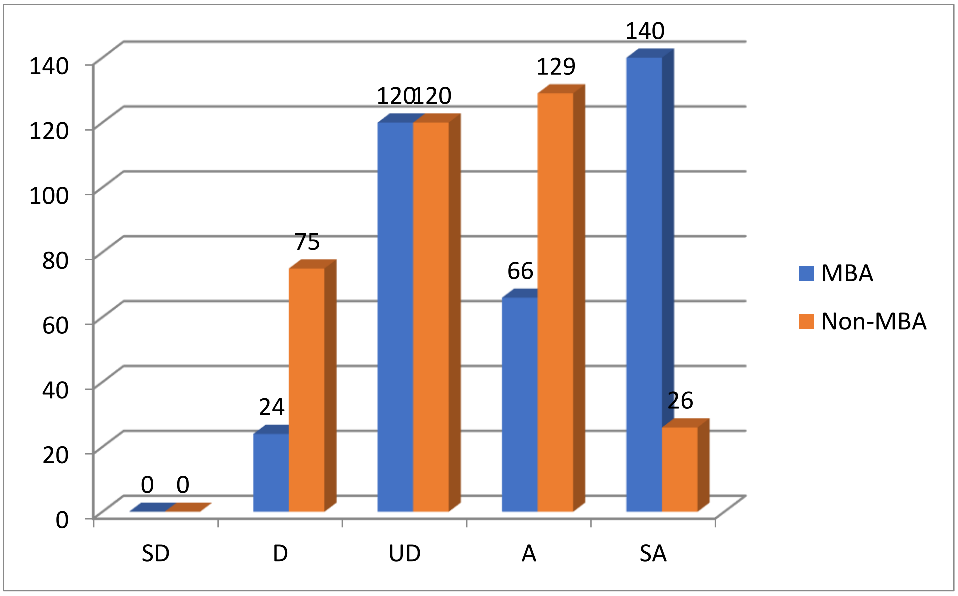

Figure 8

Based on the interaction with respondents it was observed that management respondents were in strong agreement as compared to non-management respondents. Respondents responded to the statement based on their personal and professional experience. In personal they felt that they were getting good respect, were part of family decision making and in professional life it was good job role and responsibility, clarity on career path, stability in career, etc. It was not that non-management respondents were not satisfied with their lives, but they had many things to achieve. Apart from personal achievement, they had an opinion that they deserve more respect and freedom in society. So, there were few external factors that might have influenced their response.

So far I have gotten the important things I want in life

Table 11

	SD	D	UD	A	SA	Total
MBA	0	10	74	195	71	350
Non-MBA	0	119	39	165	27	350

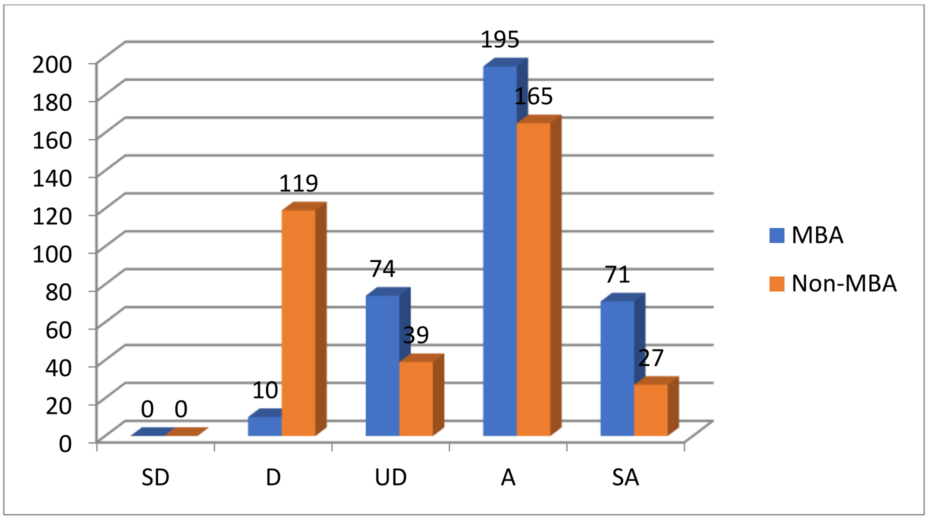

Figure 9

Based on the interaction it was observed that both respondents had agreement with the statement, but the majority was of the management respondents. The major differentiating factor was the personal and professional benefits derived from education and overall family background. Management respondents were of the opinion that due to their education they are able to reap good benefits on personal and professional front. If we consider basic needs of human being, they are food, clothing and shelter. In our context we can put it as lifestyle, earning ability and social status. It was understood from management respondents that due to management education they have been able to achieve good success in their personal and professional life.

<u>If I could live my life over, I would change almost nothing</u>

Table 12

	SD	**D**	**UD**	**A**	**SA**	**Total**
MBA	0	25	30	149	146	350
Non-MBA	0	75	87	165	23	350

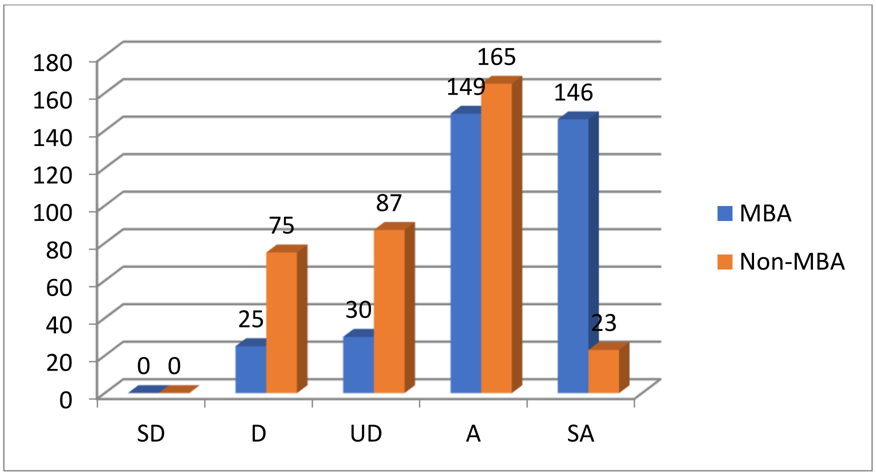

Figure 10

Based on the interaction with respondents, it was observed that management respondents had strong agreement with the statement. They had strong satisfaction with whatever they have achieved in their lives. Management education has helped them achieve social status, employability, decision making skills, confidence, etc. Non-management respondents believed they too are satisfied with their life but aspire to achieve more. They expressed that if they would have been provided with business and life skills, they too would have been in a better position today.

No matter what comes my way, I'm usually able to handle it

Table 13

	SD	D	UD	A	SA	Total
MBA	0	0	94	191	65	350
Non-MBA	0	54	115	148	33	350

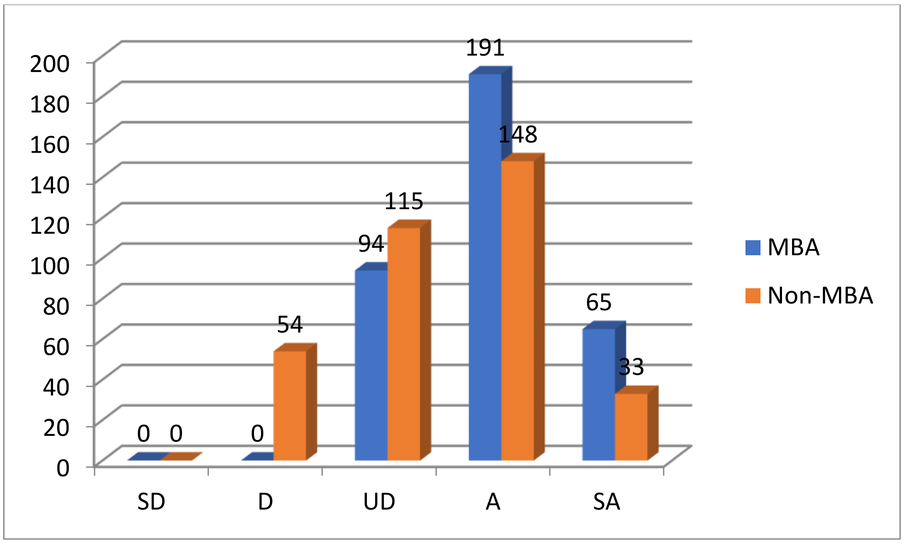

Figure 11

It is obvious that majority of the situations management respondents were more confident to face it as compared to non-management respondents. Training and grooming provided in MBA program helps to face challenging situations and provide strong foundation to build on it for future requirements.

In order to test the relationship, independent t-test was used as a statistical tool and the relationship was found to be significant at 0.05 alpha and strongly supporting the preposition.

Thus, based on above test results and discussion it is obvious that Management Education has Positive Impact on Self-Esteem, Well-Being, Pride and Self-Efficacy. Consequently, it is proved that Management Education has positive impact on Social Status of Women.

Hence, it is interpreted that "Management Education has Positive Impact on Social Status of Women".

LIMITATIONS

Above research work was carried out in Nagpur District, it may not be the same in other areas. Respondents response may not represent the overall scenario. Responses may be influenced by the research subject and/or the complexity involved in the questionnaire.

CONCLUSION

The research undertaken found out that the individuals had positive impact on their social aspects. Factors taken into account were Self-Esteem, Well-Being, Pride and Self-Efficacy of women. From the research it can also be concluded that management education can definintely help in wholistic empowerment of women. The government must generate more awareness related to management education and different support schemes available for MBA aspirants. Research results also lead to future scope for research work to be carried in the field of women empowerment.

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DIGITAL ADDICTION AND HAPPINESS QUOTIENT OF STUDENTS- A DEVELOPING COUNTRY PERSPECTIVE

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ABSTRACT

COVID-19 has fast-tracked the internet evolution in a developing country like India. Unprecedented digital growth may result in India having more than 900 million internet users by 2025 (Warc, 2020). Digital is not only fulfilling the educational, entertainment needs of students but are also resulting in behavioural changes caused by over consumption of digital content i.e. digital addiction. This research analysis the impact of digital addiction on young students in India in the age group of 18-24. The study uses mixed research design covering three steps viz collection of real time smart phone data of the screen time of 400 students, self-report questionnaire and a focus group discussion with 24 students. The findings of the study suggest that digital addiction negatively impacts the happiness quotient of the students with an urgent need for marketers to be more morally responsible with use of various digital marketing tools.

Keywords: *Digital Addiction, Digital Marketing, Happiness Quotient, Social Media, India.*

Introduction

COVID-19 has fast-tracked the internet evolution in India. Unprecedented digital growth may result in India, one the fastest developing economies of the world, having more than 900 million internet users by 2025, an addition of about 350 million users over the next five years (Warc, 2020). In India, the smartphone usage is estimated to touch the 829 million by the year 2022 as India is also the second largest populated country in the world. 6 out of 10 individuals smartphone users in India are over dependent on their phone which can be appreciated by the fact that it hardly takes them 30 minutes of waking up time to go online and get updated (Ram, 2017).

Digital is fulfilling the marketing, educational, entertainment needs of students in India. With development in the digital space, consumption is also increasing exponentially that directly puts the consumer at the risk. More than 400 million citizens of the Indian population contribute to the young workforce of the country, driving key economic activities. Hence, understanding the consumption patterns of this generation becomes essential to any broad-based social analysis. The digital growth at an unprecedented rate is also resulting in behavioural changes caused by over consumption of digital content a.k.a digital addiction. This, in turn affects various aspects of our lives including mental, physical and emotional wellbeing of young students. Life satisfaction and happiness quotient are largely the factors that can effectively quantify these impacts. To fully understand this phenomenon this research studies the impact of digital addiction on happiness quotient. A study of Digital Addiction defines it as "*developing a compulsive need to use your digital devices, to the extent where it interferes with your life and stops you from doing things you need to do, is the hallmark of an addiction*." (Time to log Off, 2018). India being a young country with majority of its population in their mid or late twenties is more susceptible to fall into the traps of digital addiction.

Hence, this paper aims at covering all the implication that intensive use of digital devices can have on the life of its students; and its implications.

Literature Review

Over usage of Smartphone and social media in India: Expansion of Social Media usage in India has seen a boom period with the increased & eases of accessibility. By the year 2023 it is forecasted that India will have almost 448 million users of social media (Diwaji, 2020). Such proliferation is bound have drawbacks in various domains. Research done by the (Dhirubhai Ambani Institute of Information and Communication) DAIICT suggests that an average Indian student spends more than 7 hours a day looking at their phones (2019). The smartphone users in India access their phone within 30 minutes of waking up , 42% of users actively use their devices during the working hours, while 38% use during the night. One research indicates that 67% of smartphone users find themselves incomplete without their smartphone. The report also discusses the high frequency usage of various apps, games and activities that the users are dependent on to their devices. (CMR, 2017).

Addictive designs of Social Media websites: It has already been established that social media platform are addictive in nature. This pattern of addiction was recognised first when the media giant Facebook created the 'Like' button. This capitalised on the human need for validation and kept its users to come back and post more in order to get more validation (Alter). Online validation functions in the same way as the human brain's reward system works on the neurotransmitter dopamine. Social media activities such as liking, tweeting, sharing, reviewing, commenting, etc. trigger the same neural responses as positive human emotion does, with the release of Domaine. This mechanism keeps the users hooked to the platform and even develops a resistance in the dopamine receptors as the users engage more to further increase the release of dopamine. (Robertson, 2019)

There are various other functions and psychological mechanisms that social media platforms operate on to increase engagement. Mechanisms like 'intermittent reward system', 'delayed gratification', 'social reciprocity' are built upon set psychological phenomenon of addiction. (Morgans, 2017). The feature of push notification functions on social reciprocity where the notification usually leads to a new message, a story posted, comment or like on the user's profile. In March 2018 Instagram came up with a new update where once you switch off the app the icon flashes a white light which seems to be taking an image. This gamification of the app icon was successful as any change makes the consumer stop and focus on it.

Another interactive way that Facebook and Google have used to keep its users engaged is by simplifying the tedious procedure of signing up and also ensures dependency and relevance of the app in the students' lives. Dating Apps, Entertainment Apps et al, have used the tricks of creating personalised playlists to maintain the membership.

With the incorporation of novel features on daily basis to increase the engagement time, it becomes essential to understand the patterns of digital addiction and what it entails.

Digital Addiction: According to research conducted by Qualtrics and Accel (2017) it is reported that young students tend to consult their phones around 150 times a day which qualifies as borderline obsessive-compulsive disorder. Audio-visual brand semiotics (distinct sounds, vibrations, colours) is capitalised to get students to respond immediately. With increasing access and acceptance smartphones communication as a cultural norm in India, 'moderation' or control of smartphones is increasingly challenging. The impact of social behaviour of peers, family and friends using the phones has further strengthened the idea that excessive digital usage is now our new normal. (Conick, 2017)

Impact of Digital Addiction: The impact of digital addiction is seen on many aspects of human psychology. According to the American Psychiatric Association taking 'selfies' is considered to be a mental disorder and posting them on social media accounts for making up for low self-worth. Resources also report a decline in sleep quality due to the harmful light emitted by the electronic devices. Moreover, lack of sleep, excessive screen time and exposure to all-night blue light is increasingly damaging various brain functions. (Alter, 2017).

Happiness Quotient: Happiness is an all-pervasive emotion that forms the backbone of policymaking of the state, understanding drivers and motivating factors of students, patterns of consumption, emotional states, etc.

Recent research on happiness emphasises the need to differentiate real time experiences of people and the memory caused by the experiences. The retrospective experience, 'is not just the mean value of the past episodes, but it is rather a weighted average of moment perceptions' (Muaremi, 2012).

There are multiple factors that affect happiness but the ones related to digital addiction include:

- Activity, Leisure
- Sleep
- Friendship, Sociability

These factors help determine if the person's digital and social media usage affect the happiness/satisfaction levels of the consumer.

Objectives of the Research

This research aims to understanding the impact of digital addiction on happiness quotient, the self-awareness of the young students about their addiction.

Methodology

This research follows a mixed research method viz real time data of screen usage (without invading the privacy of the students), a self-report questionnaire and a focus group discussion. The questionnaire based on the Oxford Happiness Questionnaire (OHQ) (Peter Hills, 2001) was used as the standard way or analysing happiness scores for an individual.

Sample

The sample size of this study for the real time data and questionnaire was 400 participants selected based on convenience sampling. The participants were in the age group of 18-25 years, from similar economic backgrounds (upper-middle class households) in India. They had ready and easy access to smartphones and internet. Although gender is not a differentiating factor in this study, the researchers have taken equal responses from both. Students selected are from Western India (Mumbai and Pune), India only. These students were exposed to the primary research in three stages each measuring a certain factor. For the focused group discussion, 3 groups of 8 participants (24 participants) each were formed from the existing students, the selection for on random basis.

Primary data collection

Primary data was collected in three stages:

Stage 1- The students were asked to download the apps RealizD & ZeroDesktop Inc (application specifications mentioned in the appendix) to collect real time data from the students that provided:

• Average Daily Pickups – average number of times respondent picks up and unlocks his/her phone throughout the day

• Average Daily Usage – average number of hours the students have used their phones for (average screen time)

• Weekly App Usage – total number of hours spent on various apps of the phone throughout the week

• Weekly App Frequency – total number of times the respondent has opened an app throughout the week

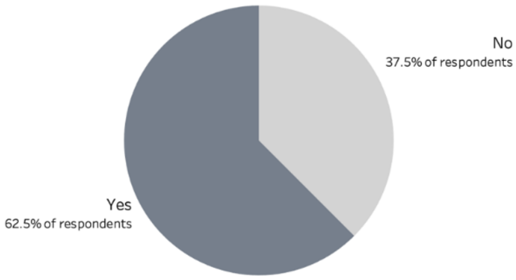
Based on research the students were categorized in the following categories:

• 0-3 hours of average daily usage – Not addicted

• 3-5 hours of average daily usage – Moderately addicted

• 5+ hours of average daily usage – Addicted to Smartphone

Data for Fragmentation of attention span was also collected through the app and was segregated based on certain research-based



parameters:

• Below 130 pickups – Attention Span Not Fragmented

• 130-160 pickups – Researcher looks at Weekly App Frequency and Daily Usage figures and estimates if the attention span is fragmented of not.

• 160+ pickups – Attention is fragmented.

The parameter is set based on the fact that 140-150 pickups a day is the average times people touch their phones. This itself is considered to be a lot according to experts. This being said for the purpose of the study this parameter along with the questionnaire analysis will help understand fragmented attention spans.

Step2- The self-report questionnaire of Oxford Happiness Quotient adapted for the Indian demographic and digital addiction was used. The questionnaire consists of questions assessing happiness, life satisfaction and traits of digital addiction. A six-point Likert scale was used to measure the responses of the agreeableness towards the statement.

Step3- A Focused Group Discussion was conducted with three groups of 8 participants each randomly selected from the students of the questionnaire. The discussion was actively transcribed, coded and analysed.

Data Analysis

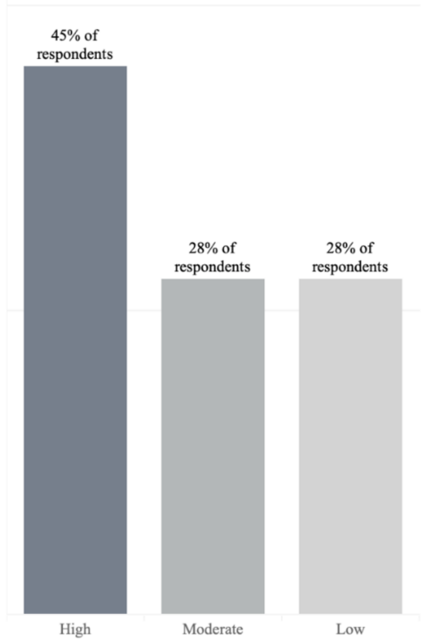
Primary Data Analysis

Stage 1

Addiction Levels

The data collected from the four hundred students was segregates in three classes based on the predetermined parameters of addiction.

Out of the 400 students of the study, almost a majority that is a 180 (45%) are inferred



to be or are likely to be digitally addiction, while nearly the same percentage of the students are either moderately addicted or not addicted at all. This study investigates the addicted or moderately addicted subset of the sample size that are 288 out of the 400 students.

Attention span fragmentation

Unified data of the students that have a fragmented attention and the percentage that did not is described in the figure below.

Based on the above figure it is clear that 260 students (62.5%) portray the traits of fragmentated attention span, which is more than half of the sample. When parallels between the two domains of digital addiction (including moderate addiction) and fragmented attention span are drawn, it can be inferred that there is a moderately high level of correlation between the two. 82% of the students express the traits of both, digital addiction and fragmented attention span.

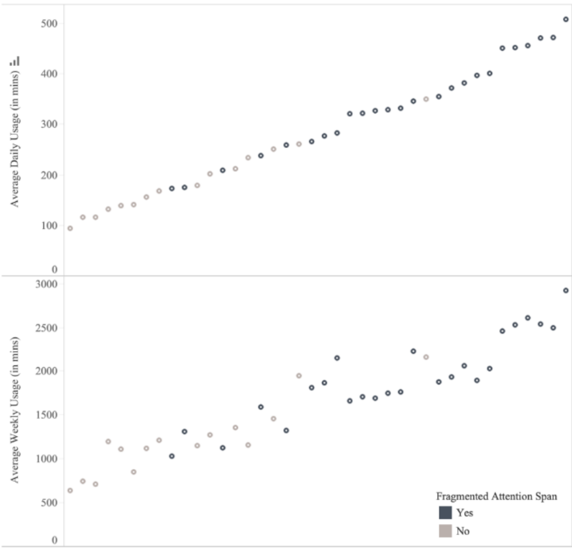
Stage 2

Questionnaire Analysis

Based on the final questionnaire formulated post adjusting the Oxford Happiness Quotient for the Indian demographic and inclusion of the digital aspect the results can be analysed based on the following aspects.

- *Accessibility and usage of the device:* Accessibility is an integral aspect of addiction and how other aspects manifest themselves. The students who reported to not have their phones on them at all times is as acute as 7.5%. Upon personal evaluation of their usage of phones in a day 35% of the participants would qualify as moderately addicted and 35% to be fully addicted to smartphones based on the aforementioned classification of addiction. When compared with the actual number of hours spent on smart phones the data does not differ much as there is a one percent difference between the cumulative data.

The data also indicates that there in an increasing dependency on phones as a well more than the majority of the students'



report using their phones thirty minutes before going to bed and fifteen minutes right after waking up. Such behavioural characteristics can also be said to affect the overall happiness levels as looking at phone post waking up and before going to sleep indicates sleeplessness and have been said to affect quality of life.

Another important aspect of addiction is control and on a gradient the participants reported that most of them strongly feel that they are unable to cut down on their usage of phones after being aware of the fact that they might be getting addicted. Power and control effect addiction in tandem to each other, if the individual is unable to exert control over their situation, the behaviour would reach addictive levels.

- *Types of content consumed on the device:* In line with the real time data collected by the students', the self-report questionnaire also indicate the highest used applications are social media apps, followed by video and music streaming. The specific type of social media platforms used by the students indicates that apps like WhatsApp, Instagram and Twitter were used extensively.

- *Impact on professional life and/or work:* It has been noted that in spite of conscious awareness of the students' work being affected because of their phones, they almost always indulge in digital activities like using their phones and/or social media to procrastinate from work. 82.5% of the students report to be beyond the threshold of slightly agree where the maximum account to 'always' being on their phones on a Likert scale. Procrastination can account for measuring the overall productivity & work life balance to measure life satisfaction ultimately contributing to the happiness quotient. However, most of the participants also confirm to be happier than their peers when asked to compare. Distraction and procrastination go hand in hand, 290 of 400 students agree that they get distracted easily. This hints towards fragmentation of attention spans. In the previous step 260 of 400 students were analysed to have fragmented attention spans. The fact that students are aware about their low attention spans indicates that they are more likely to be open to control measures. The fact that students get distracted easily can be attributed to digital addiction/overuse. A 42% and 7.5% marked to be happier and slightly happy respectively than their peers. This can be interpreted as digital addiction and/or social media usage has little to do with self-perception when compared to the respondent's peer group. Additionally, the data also points that most of the students are unable to complete the work that they aimed at completing in a day meaning that they were not productive enough based on self-assessment standards.

- *Impact on personal life and happiness:* There is a very deep impact of smart phones on the respondent's personal life which would account for happiness quotient. Most students agree to be satisfied with their lives given the background of digital addiction. The lack of fulfilment despite excessive usage hints to addictive traits and flaws in design of such platforms as these platforms hook students on and not fruitfully engage them. Dependency is an integral marker of addiction and it can be analysed that a moderate number of the students feel a sense of emptiness when their phones are not around them. An important aspect assessed in the questionnaire is the self-awareness of digital addiction of the students as it sets the benchmark for awareness amongst the students. 60% of the students think that they are addicted to their phones. This tallies with the previous step where 45% of students were addicted and around 28% were moderately addicted.

Stage 3

Focus Group Discussion (FGD)

The FGD shreds light on many key points of the interplay between the role of a marketer in the space of digital addiction the happiness quotient. These findings were related to the following four broad categories:

1. *The seriousness of the issue of digital addiction calls for intensive awareness:* It is evident that in the Indian scenario the educated marketeers do have an idea of how advertising and other contents engage the audience and/or the students but fail to understand the brevity of it. Such content is "sticky" and captures the audiences in an endless vicious cycle before the user can realise it. Another takeaway from the discussion is that the mental well-being of the users is being affected.

2. *Marketers are the key stakeholders in dictating the cycle of digital addiction*: All the participants strongly agreed that marketeers have a stronghold over creating novel and more engaging content. They are trained and retrained to 'ensure the customers are hooked' through employing different strategies. Which makes it necessary for the marketeer to have an ethical compass.

3. *There is an urgent need for the marketeers to be held responsible*: Capitalising on the competitive advantage created by digital and social media marketing completely ignores the ethical grounds and as it would put such companies at a disadvantage. It is this attitude that leads to the exploitative cycle of digital addiction that has already begun. This would provide more perspective to the public at large.

Conclusion

Out of the entire sample size 72% were found to have digital addiction and portrayed various traits of it that include excessive usage, dependency on the device, loss of control, constant usage to avoid other activities. Upon comparing these with the happiness quotient of the students, it indicates dissatisfaction at many instances negatively influencing the happiness quotient. The reduced levels of fulfilment in spite of excessive engagement further increases the engagement, continuing the cycle. However, satisfaction levels decrease, having a progressively negative impact on the happiness quotient. Along with this, digital addiction has also severed the attention span and distractibility of its students. The real time and self-report data clearly point out that 62.5% of the students have a fragmented attention span and majority reports to be distracted easily. Digital addiction can be a superlative variable governing happiness quotient and attention span. The findings suggest that 60% of the students' report that they are aware of their digital addiction, leaving a discrepancy of 10% who are addicted but not aware of it. This calls for immediate actions to raise awareness and implement coercive measures.

- Marketeers are major governors the cycle of digital addiction and need to realise the importance.
- It is the responsibility and accountability of the marketeers to acknowledge this vicious cycle of digital addiction.
- The platforms where such contents are published, and their developers should also be held accountable.
- The current situation calls for raising awareness and employing a bottom-up approach can potentially be successful.

The secondary data analysis supports the findings of the primary data analysis. Tapping into addictive behaviour of the students does give results to the company or brand but can seriously hamper the students without their knowledge. Whereas, utilising digital tools in the right manner without compromising ethical practices also yields results. This calls for an industry wise discussion on what ethical guidelines should be followed while formulating campaigns.

Future Direction

As there are no clear ethical standards for marketing practices, researches in this domain are still in their nascent stages. This study was limited to young students in Pune and Mumbai and thus further studies need to be done especially in the post-pandemic era when digital is a way of life. Online and offline life balance and many other aspects of consumer behaviour that can potentially be affected such as their emotional quotient, desensitisation levels, perspective towards such pathologies, etc. which needs more study. The juncture where disciplines like education, psychology, sociology, neurobiology, engineering, medicine and marketing meet also opens new avenues for further research.

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A STUDY OF CHANGING PROMOTIONAL ACTIVITIES AND MARKETING STRATEGIES OF SHOPPING MALLS AMIDST PANDEMIC

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ABSTRACT

'Shopping malls' are the organized form of retail sector. Malls, 'one-stop hub' of shopping and recreation are centrally owned and managed cluster of architecturally unified selling areas designed to accommodate all under one single roof. Shopping malls are witnessing a huge revamping exercise amidst COVID-19 pandemic. Lockdown leading to shutdowns of the shopping malls left the mall developers, tenants and owners with a big question mark. It forces all to rethink what next? A strong and rightly channelized marketing and promotion strategies are what mall stake holders need to carry out to recall and recollect the footfall to the shopping malls. This research paper is an attempt to understand the phases through which the shopping malls went through amidst pandemic. It highlights the problems and challenges being faced by shopping malls. Further it explores the changes that are being exploited by the mall stakeholders in marketing strategies so as to attract customers again in the new normal.

Keywords: *Marketing. Strategy, Shopping, Pandemic, Channelize.*

Introduction

Shopping malls, super bazaars, departmental stores are some of the modern concepts of retailing. Shopping malls are not just shopping destinations, but they play the role of community centres for the society. Malls serve as one stop hub for shopping, hanging out, movies, window shopping, entertainment and recreational activities, dining and much more under one single roof with an excellent ambience and a wonderful experience.

Majority of the shopping mall has seen a great boom period until March 2020, the unpleasant attack of COVID-19 pandemic. Designing and executing promotional activities and marketing strategies pre-pandemic was completely different and easy, whereas now, amidst and post-pandemic it is a big challenge for the mall stakeholders to channelize their promotional activities and marketing strategies in such a manner that they successfully attract and call back their old and new customers.

Literature review

1. Research study entitled *'Emergence of organized retail in India'* by Paramita, focused on growth of retailing industry in India and elaborated the growing awareness and brand consciousness among people of different socio-economic classes in India and how the semi-urban and urban retail markets are witnessing significant growth .
2. Research paper by Rillyan Nur Ramadhania and Atik Aprianingsih entitled *'Marketing Strategies to Enhance attractiveness of Shopping Malls case Study: Mall Ratu Indah Makassar'* revealed sixteen attributes as major strengths that should be improved by Mall Ratu Indah.
3. Thesis by Maheshwari Harshita entitled *'A study of shopping malls pull strategy for attracting customers'* was done with the objective to study the promotional activity of malls with special reference to pull strategy and to evaluate the significant difference among different income and age groups on the perception of pull strategy .
4. *'Impact of Celebrity Advertisement on Shopping Mall Consumers, A Study with reference to Chennai city'*, thesis by VALARMATHI R, is extended to analyze the effect of celebrity endorsed

advertisements on shopping mall consumer behaviour.

5. *'Branding of Shopping Malls and Preference of Customers: A Study with Reference to the City of Kochi'*, research paper by Sudeep B. Chandramana and Mr Arun Prem, focused on examining the latest trends in Indian malls, the reason for customers' preference towards a particular mall, top challenges for mall managers.

Research Methodology

The present research paper is conceptual in nature. The researcher have used the secondary sources of information from publications of various organizations, institutes, new journal and newspaper published, news articles, online and offline reports, magazines and commercial journals, websites and discussion regarding the research subject on various blogs.

Research objectives

1. To understand the pre-pandemic promotional activities and marketing strategies of shopping malls.
2. To elaborate the changes in promotional activities and marketing strategies of shopping malls post-pandemic.
3. To analyse the challenges faced by shopping malls amidst pandemic COVID-19.

Scope of Study

This research paper explores three phases of shopping malls, i.e. before, during and after COVID-19 pandemic. It is a study in depth about the marketing strategies and promotional activities which were being used under normal circumstances, problems and challenges faced by shopping malls amidst pandemic and what will be the new normal strategies exploited by the shopping malls to attract footfall back to shopping malls.

Limitation of the study

The information gathered is primarily only from secondary source due to difficulty of offline visiting shopping malls and meeting mall stake holders during pandemic period. The promotional activities and marketing strategies designed are gradually being executed and implemented as and when the government is coming up with rules to be followed to re-open the malls. Time will prove the effectiveness and success of these activities and strategies, which is yet to be recorded.

Marketing Strategies of shopping Malls

The basic marketing model which usually is the guide line to develop any strategic marketing plan involves the business product, the price of the products, the promotional techniques, and the marketing place. Shopping malls have to go much beyond this basic 4Ps marketing model. The marketing plan blueprint of a shopping mall must promise overall property performance along with satisfactory profit to the tenants. Proper tenant mix to a great extent decides the customer attraction and assures the profitability of the mall. Mall stakeholders including property owners, managers, and tenants, all have a vested interest in marketing the property successfully. A well-designed marketing plan executed by a shopping mall assures higher rentals, fewer property vacancies and more sales.

The 4Ps marketing model usually serves in designing and developing a strong marketing strategy. No strategy can be static; in fact, they have to be dynamically designed in a manner to serve according to the changing levels of competition, changing societal expectations, changing technology, changing customer behaviour etc. The 4Ps marketing model involves an understanding of the four elements of marketing-mix necessary for effective marketing which involves; the product, the price of the products, the promotional methods and the marketing place. A proper SWOT analysis is required to understand and finalizing the marketing strategy the will be suitable to a particular mall. Hence, let's understand the basic 4P model of marketing. Product selection

Shopping malls act as one-stop shopping destination for several goods and services. They must serve to accommodate state-of-the-art products of well-known brands from local merchandisers and importers, variety of stores selling electronics and digital gadgets, accessories, clothing, FMCG products, footwear, etc. and diversified services like food courts, movie theatres, recreational activities, gaming zones, ATM facility, organized parking, proper rest rooms, drinking water facility, children play area etc. Variety of the products that a mall offers and the services that create 'happy customers' paves way to a successfully performing shopping mall.

Price of the Products

Price decision of the goods and services is one of the most important elements of the 4Ps marketing strategy. A good pricing strategy assures the correct price point that generates maximum profit on the selling the goods or services. A proper survey and analysis is required also in deciding the rentals of the shops of the shopping mall. Factors that directly or indirectly affect the price decision like products and services offered by competitors in the market, demand and supply of goods or services in the market, selling and distribution cost, target customers, etc. The price strategy has to be selected depending on what the mall intends, it may be creating awareness, create brand / build positive reputation, take competitive advantage etc.

There are many types of pricing strategies but the most common ones are;

Cost-plus Pricing – very simple to calculate; just add profit to the cost.

Competitive pricing – price is decided based on the price charged by the competitors.

Value-based pricing – price is based on the value or worth of the product or service the customer perceives.

Price skimming – Initially starting with a high price and then as market evolves lowering it.

Penetration pricing – Initially starting with a low price to enter a competitive market and gradually raising it.

Promotion Technique

Product promotion is a combination of advertising and publicity done to promote any brand, product are service in the market. This again one of the most important elements of the marketing mix model. Trends are changing on daily basis. The expectations of customer are changing with time. Gone are the days when plans made once used to continue for years. Today if one has to sustainably grow and stand the stiff competition, a dynamic promotional plan is something that is required to hold back their old customers and attract new ones. New and innovative ideas for branding any product or service are the need of the hour to ensure continued growth. Every business uses a continuum of promotional techniques to make public relations, exhibitions and publicities. Advertising and promotion can be a done on several platforms like promotional advertisement on television, broadcast on radios, local hoardings, brochure distribution etc. Digital platforms like shopping malls own website and App can also be included in promotional plan. Social media; Facebook, Instagram have also become a popular platform of marketing.

When talking of promotional activities; discount seasons, festive discounts, exhibitions, tradeshows, field marketing, BOGO (buy one get one) offers, free sample distribution and such many more ideas can be employ to pull customers to a particular mall.

Marketing Place

Place concept of 4Ps marketing model involves marketing strategies such as the mode of transport, the channels of distribution, the warehousing facilities and the techniques of inventory control. All these variables are usually employed hand-in-hand. A shopping mall must have a designated channel of distribution and a mega warehouse to execute the storage facility to stock the essential products of the mall on a continuous basis. This will make branding and rebranding easy. Further it will also assure proper quality control and availability of goods as per the demand. Shopping mall must accommodate an efficient display area where the products can be efficiently displayed.

A dynamic marketing model helps mall management to understand the progress and success of the mall on a continuous basis. This ensures that marketing strategies can be renovated or revamped to amplify or improve the products and services as and when need arises.

Points to be taken care while designing a shopping mall marketing plan

Shopping malls are not an overnight revolution, it has evolved through years, but the the essence of tying communities together still remains. Malls have their roots in ancient times when communities were in need of a uniting center, where they could not only find the products and services but could also interact with other members of the society. Modern shopping mall serves a *'one stop hub'* or *'all under one roof'* for the people in the society. Society has great expectations from a mall, much beyond shopping. It is a local destination for people to shop, hangout, dine, movie, entertainment, recreation or spend quality time in a luxurious ambience.

1. All marketing efforts of a shopping mall must aim at attracting customers.
2. It must focus on how best it can serve the customers locally.
3. Analyze the footfall on different days of the week.
4. The plan should be intended to extend throughout the year.
5. Special business days; weekends, public holidays and festivals to be recorded so as to enhance the promotional activities on these days to attract more footfall.
6. Study customer shopping behaviour to accommodate them better.
7. To create a set of happy, satisfied and loyal customers, a mall management must plan for convenience and comfortability of customers which will increase the frequency of their visit and bring them back repeatedly.
8. A mall which creates loyal customers can successfully stand competition, perform well and build a brand image.
9. As shoppers want variety of offerings, the tenant mix should be tailored to serve the local customers to their expectations.
10. A convenient shopping mall is usually a successful one.

COVID-19 a challenge to shopping malls

Somewhere in the month of March in 2020, the spread of COVID-19 brought Indian economy to a near halt. Only general stores, grocery stores, dairies and pharmacists stayed open as essential goods businesses. Shopping malls with electronic stores, apparel stores, footwear, accessories and more were temporarily shuttered as these are considered non-essential goods. Economy has witnessed a sudden shift to e-commerce by many retailers, this being either the only option or the safer mode of shopping. Shopping malls across India have remained shutting or operated partially last 18 months. Slowly the malls reopened with strict guidelines of wearing masks, sanitizing and social distancing. Almost 80% of the footfalls in malls had returned but soon due to the second wave of Covid-19 wave and local lockdowns shopping malls had to shut down across the country. Now, after the second wave gradually malls are opening but the footfall count is unsure as use of mask, social distancing, and sanitizing norms continue. Also, though malls have reopened, Indian shopper's mentality has changed to a great extent. They have either started to prefer open-air areas for shopping or online shopping for safety purpose. This predefines that the new normal is not going to be easy but is going to be full of challenges to all shopping mall stakeholders.

Shopping malls in Indian retail sector play a central yet complicated role. They serve the society by creating a locus where merchants connect with customers and offer products, services and experiences that no single retailer can offer.

Fear to reopen under restricted guidelines in the new normal, stress of footfall recovery, question mark about the success of the planned new marketing strategies and promotional activities, challenges of e-commerce, shoppers psychology of fear of safety, extra burden of overheads expenses of sanitizing and creating a safe mall atmosphere, limiting the crowd in the mall to maintain social distance yet increasing footfall and so on. These and many more such challenges the shopping malls are facing amidst pandemic COVID-19 which might be unfavourable for the growth of shopping malls.

Post-COVID Marketing Strategies

Almost all shopping malls have adapted to sanitizing, social-distancing and mask-wearing to create a COVID safe atmosphere. To recover sales, to recall foot traffic and to promote in-store time spent by the footfall, shopping malls must reboot their marketing and promotion strategies and resort to new mediums and methods to revolutionize the complete shopping experience. It is a visible fact that on one side fears of social gatherings, crowds and social interaction will retain for a still long time, yet other side shows, crave for engagement and connection after months of isolation. Hence, shopping malls need to prepare a frame that fits to adapt and survive ensuring a balance between commercial viability and the emotion and psyche of the shopper. Greater degree of touch-less amenities with hygiene atmosphere has become the primary need of shopping malls.

1. Subdivision into smaller zones

To avoid overcrowding and maintain social distancing large mall areas can be subdivided into smaller zones separately meant for different purposes; queuing, waiting areas, takeaway services, pick-up zones, drive through pick-up points etc.

2. Remodel car parking

Remodelling car parking areas to adapt for contactless pick-up zones, including separate access and refrigerated lockers with unique access codes etc. this could also be integrated for centralized contactless drive-through routes for food and beverage outlets and restaurants.

3. Art and cultural offers

Shopping malls are now not only focusing on big brands, electronics, fashion stores, food courts and recreation and entertainment offers, but are adapting to include arts and cultural offers and attractive public places to establish improved mobility, activity and safety. Under such circumstances malls will reposition themselves amidst COVID-19 pandemic.

4. Convert mall space into personal shopping precincts

Malls have to rethink in deciding tenants and focus on personal shopping precincts; beauty parlours, fitness centres, wellness and healthcare centres, Gym/sports destinations, pharmacy/medical facilities, play and education zones, e-sports venues, cultural spaces, community halls, adaptive co-workspaces. To mention a few such possibilities can be planned and implemented.

5. Digitization and Technology

Shopping malls can target and engage with customers online, for this they can convert foot traffic into intelligent data. As shopping is not the only attraction, mall management need to promote themselves on digital and social media platforms about their latest recreational and entertainment activities. For this they can make use of promotions on mall websites, app, Facebook, Instagram etc. A well planned an super new idea that was not earlier available in the mall can pull the attention of mall visitors.

Conclusion

COVID-19 has made unparalled destruction all over the world. No one is left unaffected. The economy has been facing a temporary standby, but is prepared for a stronger comeback.. Everyone has accommodated and have adjusted in the new normal. COVID-19 has collapsed the retail sector to the extent that survival has become impossible and has forced all physical retailers with small stores or huge building structures like shopping malls and departmental stores to rethink for a dynamic comeback to face the challenges in the post-COVID era where in-store shopping will never be the same. Shopping malls are essence of organized retail business. Selling of goods is not the only purpose of mall. Basically malls are more of other things than shopping. Among which entertainment, recreational activities, movie theatre, community meeting place, place to hangout etc. COVID-19 pandemic was a severe blow to the mall business. Looking forward positively, there has to be a comeback strategy for every business. So are the shopping malls coming up with such marketing strategies and promotions that no one can resist from entering the malls. Also after more than 18 months of isolation everyone is looking forward to move out with friends and family to have fun and enjoy special moments at convenient and luxurious ambience, that's where malls can serve their best and attract foot traffic back.

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IMPACT OF CHANGING BUSINESS ENVIRONMENT ON INDUSTRY PERFORMANCE: A LITERATURE REVIEW

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ABSTRACT

The present study is an attempt to identify various components of business environment capable of affecting various Functional areas of Pharmaceutical Organizations and its impact on performance. This paper presents a comprehensive review of various studies conducted by experts, researchers, and academicians all over the world. The paper essentially is the summary of work done by different researchers in the field of various business environment components affecting various functional areas of organizations and its impact on performance.

Keywords: *Business Environment, Impact, Performance, Functional areas.*

Introduction:

Business Entities form an integral and vital part of any society. These are the institutions that cater to the goods or services for the consumers, gainful employment for the skilled / needy and continuous betterment of living standards in general. Thus, the role of these entities (however tiny or large) to the economic growth of a country is crucial. Therefore, how these businesses manoeuvre through the uncertain business environment is intriguing as well as interesting matter of academic study.

It is extremely important to have insights into one's business environment to formulate relevant strategies. The environmental factors are all pervasive in the business, the nature, location, and the prices of factors / products, the supply chain, or the HRM policies. Therefore, it is important to learn about the various components of the business environment, involving economic, the socio-cultural, the political framework, the legal, and the technological aspects.

Quang Linh Huynh(2018) has studied the relationship between the external market climate, corporate governance, and organisational efficiency. The research offered much-needed insight into the essential relationships between the parameters. Usually, the analysis is an empirical study of the effects due to corporate governance and external market conditions on organisational success. This sheds light on how corporate governance interacts with unpredictable externalities to improve organisational efficiency. According to the findings, companies that are exposed to the risks of external market environments should follow appropriate corporate governance practises. Thus, the companies can achieve the best organisational performance. This research paper would help the present study in linking pertinent variables in order to manoeuvre through the uncertain business environment.

Giriati (2017) provides clarity over the effect of Business Environment entrepreneurial competence and orientation. It's a popular myth that the business organizations carry enormous freedom to formulate strategies. On the contrary, External Business Environment can have a crippling influence on the companies' ability to operate.

This demonstrates that the variables of entrepreneurial orientation and individual entrepreneurial competency have a positive impact on business success. Furthermore, in hostile situations, the same may be beneficial to business success. Individual entrepreneurial competency, on the other hand, has a positive impact on business outcomes, but it is susceptible to changing business conditions. According to the study, "Entrepreneurial Orientation has a positive and stronger impact on Business Performance" in a competitive environment. The researcher will gain a better understanding of business competencies (individual and organisational) as a result of this analysis.

Siti Normi, SE, M. Si (2017) The researcher chose this research article to review for its effort in linking Strategic Human Research Management to organizational competitive advantages. As the theory would imply, Competitive Advantage essentially is how a given organization does better than the rest of the industry. As a result, the article addresses the importance of competitive advantages, Key Result Areas, and ‘human resource concentration' as a strategy for integrating human resource functions into the strategic domain.

Dr. Joshua D. Jensen [4] (2017) . The current market climate is highly competitive, demanding, and unpredictable, according to the report. Due to this Many organizations that have enjoyed many dominant players in the industry for decades had to yield to the business dynamism.. ‘Traditional structures and leadership approaches’ as the author mentions are no more effective in managing modern organizations effectively.

According to the study, businesses must turn into learning businesses. In today's demanding market world, this paper emphasises the value of organisational learning. Systematic attempts to acquire and apply organisational learning will result in the development of a learning company, which will pay off in the long run. The present study is about the impact of changing Business environment on performance of select pharmaceutical organizations in Maharashtra derives that only learning organisations are distinguished by certain core disciplines outstanding leadership, robust leadership growth programmes, and innovative strategic planning processes.

Luz Esperanza Bohórquez Arévalo (2016) The study focuses on how organisations react to a changing market climate. As the paper argues, the inflexibility, vulnerability, and slowness with which business organisations react to evolving environmental conditions stems from the prevailing management paradigm's mismanagement of complexity.

The failure of business organisations, according to the research report, is primarily due to conventional management, which is ineffective in achieving goals, achieving the vision, and so on. Furthermore, the study emphasises the need for new ideas, models, and organisational and administrative practises that increase the degrees of freedom available to businesses. Thus the above literature paves way for the present study on Impact Of Changing Business Environment with specific reference to the Pharmaceutical Organizations in the study area.

Ridwan Ibrahim, Ina Primiana (2015) effectively establishes the connection between the business environment and the performance of the organisation. The research is primarily a theoretical examination of the impact of the market environment on organisational success. The research shows that the market climate has a substantial influence on an organization's efficiency. According to the authors, the market climate has an effect on the success of organisations. This research paper made the present study focused on various components of Business Environment and their impact on different functional areas.

Corina M. Rădulescu etall (2015) The study draws a contrast between reactive and proactive approach of an organization to the changes in the externalities. Companies achieve a competitive advantage, according to the study, when they can easily learn skills. This necessitates a company's dedication, as well as the rapid dissemination of product, technology, and management information. The existence of a national and regional ecosystem that promotes competitive advantages is particularly important. The developed model can be used to determine the degree of entrepreneurial proactivity based on business risk and entrepreneur management results. The present study benefitted in terms of organization's preparedness for turbulent business environment.

TömöriGergő (2014) The research paper has tried to investigate the role of innovation eco system in augmenting profitability of the organizations. Pharma R&D operation had the greatest impact on long-term firming, both individually and in contrast, among the factors studied, but different financial strategies and accounting policies as a type of risk management asset also had a significant impact. The researcher's methodology is primarily theoretical and quantitative in nature. The findings of this study should be used by all cross-border pharmaceutical companies, as they demonstrate why more commitment to R&D is needed in this sector in order to maintain market position and ensure multilateral disease prevention. The above study gives an insight into the effect of R&D efforts as a strategic approach to manage business uncertainties.

Dr. Muhammad Khalique (2014) The study focuses on small and medium-sized businesses, which are considered the backbone of every economy in the modern world.

The author refers to organisations with a clear vision, who understand their organization's mission and direction, and who can succeed in a variety of circumstances and who can plan themselves well to outperform their competitors. The above study endorses the need of empirical research to be done in the area of strategic planning with special reference to various components of strategic planning in emerging economies. So far, there has been a severe lack of analytical research in the pharmaceutical industry from a strategic planning perspective. However, the researcher's aim in this report is to perform an analytical study in the pharmaceutical industry from the viewpoint of market environment constituents.

Francesca Capo *etall* (2014) This paper is an example of a pharmaceutical company's creative business model. The research focuses on the competitive climate in the background of the pharmaceutical industry's newer problems in mature markets. The authors propose accounting for a paradigm shift in the environment while allowing established business models to integrate with competing firms' business models, giving rise to something important, namely a network. A network that allows logistics, analysis, and development activities to be shared. In reality, size alone is no longer an effective tool for accurately representing a firm's competitive capacity; instead, cooperation, specifically cooperation to manage all strategic stages of the value chain, has become necessary. The paper provides a means for exploring similar strategic approaches for the pharmaceutical companies in the study area of the present study.

Gayane Gyurjyan *etall* (2014) To achieve and maintain high success over time, according to this study, leaders must strike a finer balance between their company's health and its performance. According to the report, organisational health factors like culture and motivation can be difficult to measure and tackle, leading some executives to dismiss them as "soft stuff." The Organizational Health Index (OHI) was developed by McKinsey & Company and offers a simple vocabulary and reliable measurements to make health as concrete and manageable as finance or operations. Finally, "health is defined as an organization's ability to align, execute, and renew itself faster than competitors, enabling it to outperform competitors," according to the report.

The study proposes three steps to reform the industry in line with market dynamics: ensuring an adequately resourced and disciplined approach to transformation, and ensuring an appropriately resourced and disciplined approach to transformation. Over-indexing on external attention and aiming for concrete simplification

Any company is under the threat if its experiencing suboptimal communication and Slower speed of reaction. As the report interprets, this may be due to the change fatigue that is plaguing the organization and hence immediate corrective measures must be taken. This lesson after the review of the above report would help the researcher in framing right approach for the company to follow under similar circumstances.

Zoran Jovanović (2015) The study identifies the need for managers to respond with agility to the dynamic business environment. There is an elaborate review of 'limiting factors' inherent to managers and their influence on the managerial response to the changing business environment. This research suggests ways for managers and organisations to enhance their own preparation and flexibility, which is needed to respond quickly to changes in the business climate. In this analysis, different forms of organisational learning are discussed, as well as their relationship to strategy development and implementation. The researcher draws inspiration from the above study to develop new perspectives for the present study for the companies to deal with the dynamic business environment.

Muhammad Wasim Jan Khan (2014) Strategic planning, as stated by the research paper's author, is critical to the success and survival of any business organisation. Strategic planning plays a greater role in small and medium companies, which are considered the cornerstone of every economy in today's world. Similarly, research on strategic planning in developed countries is limited, and empirical studies on small and medium enterprises in developing countries are severely lacking. As a result, the importance of the current research becomes clear.

Wageh A Nafei (2016) The study attempts to link organizational agility to the organizational performance with reference to the pharmaceutical industry.

According to the findings, there is a significant link between organisational agility and success. The discovery shows that 'OA' has an effect on 'OP' in every organisation. The study made a number of recommendations, one of which was to pay more attention to OA as a source of OP improvement.

Since modern organisations rely heavily on information in general, and information systems in particular, OA research is a growing academic effort in information systems fields. OA refers to an organization's ability to succeed by sensing and adapting to environmental changes, which has become increasingly relevant in today's highly competitive and volatile market climate. It is viewed as a critical business element and a possible enabler of a company's competitiveness.

Sensing Agility, Decision-Making Agility, and Acting Agility/Practicing are the three dimensions of organisational agility discussed in the review.

The research examines the impact of agility on performance among managers in the Egyptian pharmaceutical industry, with the aim of improving OP through OA. OA may have an effect on OP. It encourages staff to adhere to professional standards.

According to the study, OA may exist in Egypt thanks to top management in the pharmaceutical industry. As the author points out, this can be accomplished by considering the needs of workers. Absenteeism and turnover will be reduced as a result. Productivity and profit margins can increase. The study certainly provides hints to improve organizational performance by leveraging level of agility existing in the organizations of the study area.

Dr. Anil Kumar Singh (2015**)** The study claims that for any organization, strategic Robustness and resilience shape its competitive advantage/s. This study is in contrast with many other in the subject matter as thus far both were presented as distinct, this study probes the organizations for the similarity and mutual dependencies as well as puts forward a correlation frame work of organizational attributes with reference to Indian Pharmaceutical Industry. It is often found that business organizations are having a narrow view of their strategic orientation and behaviour, when they obsessed with robustness or resilience as two separate virtues. Thus, the study stands different by offering resilience and robustness as organizational capabilities which make the organizations futuristic and proactive. The study also provides clues as to how these capabilities may be translated in to competitive advantages. The themes of resilience and robustness, as well as their effect on organisational change capacity to drive competitive advantage, are also reviewed and examined in this paper. The current study will provide valuable insights into the factors that contribute to robustness, durability, and shift, all of which lead to superior efficiency, which is a sign of competitive advantage.

Abdel-Aziz Ahmad Sharabati (2014) The study's aim was to see how strategic management using the Balanced Scorecard (Balance Score Card elements) impacted the financial output of Jordanian Pharmaceutical Manufacturing (JPM) companies. JPM Organizations have a significant implementation of balanced scorecard variables, according to the report, with learning and growth ranked highest on average, followed by internal processes, financial perspective, and customer perspective, in that order. The findings also reveal a connection between balanced scorecard variables and the business efficiency of JPM Organizations. Jo is directly influenced by strategic management (balanced scorecard elements).

Dr. Abdel-Aziz Ahmad Sharabati *etall* The impact of Intellectual Property Rights (IPRs) on the Business Performance (BP) of Jordanian Pharmaceutical Manufacturing (JPM) Organizations is the the moot point for the above research paper. Following a thorough investigation, a positive significant relationship between IPRs and Pharmaceutical Organizations' business success was discovered. Though the research has significant limitations and is restricted in scope, it cannot be used to make broad generalisations. It is, however, most important to the pharmaceutical industry. The findings of this study would support both academia and industry by demonstrating the components of IPRs and providing guidance on how to improve and increase them within their organisations. IPRs are a significant source of wealth for organisations, and they should be taken into account when developing the JPM Organizational strategy. With empirical evidence, this study adds to previous research's view of a linear relationship between IPRs and organisational BP.The researcher during his own primary investigations has realized that even the pharmaceutical companies in the study area have little regards for developing indigenous IPRs. However, the above study instigates the present research to further explore the industry in this regard.

V.VenuMadhav(2012) The study touches upon Indian pharmaceutical industry focusing on companies that are into life solutions catering to both domestic and global markets. As the author claims the industry is attracting global attention as a hub by virtue of its indigenous knowledge solutions achieved by Clinical trials, contract manufacturing and R&D. Drug and Pharmaceutical Industry has on its mandate such issues as environment safety, IPRs, FPIs/FDIs in the industry, Enhancing quality and making healthcare cost effective and more inclusive, and so on. The study mentions that this can happen only if there are Socio-legal and ethical /moral compliances by the industry. The study, while highlighting these issues suggests more attention on constant Research and Development, and policy intervention from the government. Thus, the study offers some orientation for the present study in this direction.

Bahjat Eid Al-jawazneh(2012) The aim of this research is to learn more about the effects of flexible manufacturing processes on the operational efficiency of pharmaceutical manufacturing companies in Jordan**.** For the 'flexibility,' the study looks at machine/equipment, output level, material handling methods, product mix, and routing methods. These were chosen to reflect the manufacturing flexibility factor, while operational efficiency was defined by quality, cost, speed, and reliability. Manufacturing flexibility is being adapted to a moderate degree, according to the study, while operational efficiency is impressively good. The study also found that manufacturing versatility dimensions have a major impact on pharmaceutical manufacturing companies' operational efficiency.

The study infers that by and large manufacturing flexibility is grossly neglected area and there is much more potential to take up academic research. As this study seeks to cover different functional areas for agility and excelling in performance, the above study makes the researcher adequately equipped to deal with the area of operational excellence.

M.D. Nair (2010) Intellectual Property Act 2005 and other related legislations, have long term influence on the Indian pharmaceuticals industry. The above study looks into the prospects of these legislations in the coming years. The study discusses if the growth momentum of the Indian industry for the last few decades was adequate and sustainable, if the indigenous R&D are properly commercialized, and whether the global markets perceive India as a leader and cost effective supplier of quality drugs, and so on. Similar studies across the world have attempted to analyse patent regimes adopted by different countries.. In wake of the new patent regime, the present study becomes relevant on the part of all stake holders to clearly define and implement strategies which will convert challenges into opportunities.

NeetuDubey *etall* (2011) The paper is written in the context of the TRIPS Agreement's Patent Regime of 2005. As the author points out, the Indian pharmaceutical industry is experiencing major changes as a result of the 2005 Patent Act, which included the implementation of Product Patents in India. The study also looks at the success of the Indian pharmaceutical industry after TRIPS. The study successfully establishes that the pharmaceutical industry is in a strategic alignment phase to face the emerging competitive market climate. As a result, the Indian pharmaceutical industry, which has close ties to the global pharmaceutical market, will see increased integration.

The authors correctly point out that, on the one hand, business costs are rising, while on the other hand, consumers are seeking more creative pharmaceutical products at lower prices. The brand new patent regime has certainly signalled significant shifts in market dynamics. Essentially, market leaders have been forced to reconsider their conventional business strategies on both a domestic and international basis.

Christina Sheela S (2015) The study has examined growth pattern of Indian Pharmaceutical Industry in terms of output, value, volume and number of units in contrast to the growth story of the Indian Economy. The above thesis has also studied select Indian Pharmaceutical companies over a period of 10 years to track their financial performance and presented a financial situational analysis of the industry in the backdrop of technological and economic challenges. Parameters like ratio analysis to gauge profitability position, asset utilization position, leverage position, liquidity position and growth analysis of the company. Overall, the thesis would help the present study in carrying out its own detailed analysis from financial perspective.

Shilpi Tyagi *etall* (2016) This paper evaluates the key drivers of profitability with reference to Indian drug and pharmaceutical industry. The authors point out that the Indian pharmaceutical industry has a history of poor ties in R&D initiatives. Owing to the shift in the economic climate as a result of post-TRIPS enforcement, the industry is realigning its strategies. Export intensity, advertising and marketing intensity, and the Post-Product Patent regime have all been found to have a positive impact on industry profitability. The study also shows that the debt ratio and operating expense to total assets ratio have a negative and statistically relevant effect, suggesting the need for companies to strengthen their fund management and cost containment. As part of their long-term plan, companies should pay much more attention to optimising their operating costs, advertising and marketing expenditures, and improving their export orientation, according to the report. The current research may have similar consequences for companies in the study field.

Conclusion: The present review paper systematically analyzes the research objectives, findings and thereby the research gaps that can be filled by the researcher. Following research gaps were arrived at after completion of exhaustive literature survey:

1. Thus far, the research works on Pharmaceutical business environment were focused on large and established companies. Therefore, they could hardly provide a suitable template for business environment analysis and/or strategic formulation relevant to small/ medium Pharmaceutical companies.
2. An extensive study of Pharmaceutical industry in the state of Maharashtra, from academic point of view is found to be missing.
3. The present research work stands out unique because of the study period involving the global pandemic and its after-effects.

Thus, the researcher gains important insights and a clear roadmap to carry out the ongoing research work entitled “A study on impact of changing business environment on performance of selected Pharmaceutical Organizations in Maharashtra”.

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STUDY ON FINANCIAL PROBLEMS OF SHRIMP FARMING UNITS IN RATNAGIRI DISTRICT MAHARASHTRA

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ABSTRACT

The commercial shrimp culture was introduced in the last decade of 20th century and getting a climax in 1994 and thereafter it was suddenly declined in the Maharashtra state. The series of while spot syndrome eruptions, lack of investment of capital and present issue in shrimp units. Problem in quality brook stock, increased cost of production While majority of the output comes from Maharashtra state, particularly the Ratnagiri districts. The present work was carried out on data collected from 18 shrimp farms along with farmers in different groups of Ratnagiri. The present trends indicate that the sector is set to revitalization, but the future prospectus of shrimp farming will also depend on the nourishment of while leg shrimp i.e. Litopenaeus vannamaei that was introduced recently in India. Although it provided a hope and opportunity for sustainable shrimp farming. Some diseases are already reported. The main problems and constraints expressed by the farms are discussed according to the harshness in the farming practices in shrimp culture. Availability of healthy and disease-free seed is a major problem for them. The possible suggestions are identified by the shrimp farmers are also discussed.

Keywords: *Shrimp culture, Maharashtra, Problems, Suggestions, Finance.*

1 Introduction

"Necessity is the mother of invention"

Human being is one of the active animals busy in searching various things called as research or invention. The ever-increasing growth of world population and the continuous demand for food has made man to search for new means of producing food. Though green revolution has brought about considerable improvement in the nutritional standards, a large section of the population still suffers from malnutrition (Daily Lokmat, Mumbai Edition, 23rd June, 2019). To complete the nutritional needs, vegetables are not sufficient, thus the human started to take non-vegetable foods such as meat of animals, fish, etc. Science proved that Fish and shrimp are a major source of protein to control and to diminish malnutrition. The nutritive qualities of aquaculture products are better than those of the farm animals with high conversion efficiency. The last decade has witnessed a tremendous rise in interest in aquaculture industry as a profitable protein-rich food producing system. Aquaculture is one of the fastest growing food producing sectors in the world (FAO, 2005).

India has long tradition of aquaculture from time immemorial as a sustainable activity and is presently a leader in the world. China is the leading country in aquaculture, followed by India, having contribution with 4.2% of the total global production in 2004 (FAO, 2006). Aquaculture technologies have undergone considerable advancement in the last three decades mainly because of the stagnation of fish supply from the capture fisheries sector. Shrimps form a valuable component of capture fisheries. The fish processing industry largely relies on shrimp landings since they constitute a major and most valued export-worthy seafood commodity. As a result of indiscriminate exploitation of the shrimp resources of the country, their catches appear to be declining in the recent years. At the same time there is an ever-increasing demand for shrimp in international as well as domestic markets. This situation has necessitated an immediate search for new resources from unexploited areas and the generation of new (additional) biomass through shrimp aquaculture. Among crustaceans, shrimps constitute the group that is widely cultured in recent days. At present Shrimp aquaculture has attracted many investors because of the profitable export propositions it offers. The major countries that are now engaged in shrimp farming are China, Japan, Indonesia, Korea, Malaysia, Philippines, Singapore, India, Thailand, Taiwan, Vietnam and the United States of America.

1.1 Shrimp Farming

Shrimp farming is an old age practice in India. Traditional shrimp farming in the coastal low lands like Pokkali fields in Kerala, Kharlands in Goa, Khazans in Karnataka and Bheri in West Bengal was in practice way back in 1960s, where production was achieved up to 0.5 tonnes per hectors per year. Because of its high value export potential, the importance of shrimp farming has been realized by Government and Semi-Government agencies. Having noticed the importance of shrimp farming, the Ministry of Agriculture (MoA), Government of India (GoI) established centrally sponsored shrimp farms in most of the maritime states during late 1970s and 1980s. However, these farms have not shown any appreciable impact in the enhancement of shrimp production from the aquaculture sector.

The ever increasing export demand for shrimp has continued to exert pressure on the fisheries resources available for exploitation in the natural water bodies. Over the years, the shrimp catches from the natural water resources have drastically declined due to over exploitation. Simultaneously, extensive type of shrimp farming was in practice in the states of Andhra Pradesh, West Bengal, Kerala, etc. where production ranged from 200 to 500 Kg per hector within 4-5 months (Ganapathi, 1991). The major block in the development of shrimp farming on scientific lines was non-availability of hatchery produced shrimp seed and nutritionally rich balance diet during 1970s and 1980s. The shrimp farming was completely dependent on wild seed and traditionally prepared farm made wet feeds. It is resulted into very low productivity.

Studies on maturation and breeding of various commercially important shrimps were initiated by the Central Marine Fisheries Research Institute (CMFRI) in the early period of 1970s, when no commercial hatchery was established in India. Keeping in view of the ever increasing demand for shrimp seed, the Marine Products Export Development Authority (MPEDA) established the Andhra Pradesh Shrimp Seed Production and Research Centre (TASPARC) at Visakhapatnam, Andhra Pradesh and Orissa Shrimp Seed Production and Research Centre (OSPARC) at Gopalpur of Orissa with American and French technologies respectively during the end of 1980s. These two hatcheries provided assistance for the establishment of a number of private hatcheries in Andhra Pradesh and Tamil Nadu during 1990s. At present about 237 shrimp hatcheries are in operation in India, with a total production capacity of 11.425 billion post-larvae (PL 20) per year (Anon, 2002).

2. Research Methodology

The increasing globalization of world economy and the ever-continuing information explosion has caused growth of world of fisheries. As a result, the state needs field research and surveys for updating policies and priorities to boost the economic progress of the shrimp farmers and of the state. As fishery is an important economic activity, the state should formulate policies to achieve higher productivity, remunerative prices and increased net income of the shrimp farmers. The area under shrimp culture in Maharashtra is about 720Kms. At the same time, the potential area under use is found suitable for shrimp culture. Therefore, an urgent solution is needed to frame policies to make a sustainable development of area under shrimp culture. Even though the state has been able to achieve the breakthrough in increasing productivity level well above the national average, the volume of production was not enterprising from 1991-92 to 2001-02. The percentage composition of brackishwater shrimp aqua farms indicates that more than 90 percent of aqua farms constitute small categories 1.78% of Maharashtra as against 49 percent at the national level. Similarly the medium and large farms constitute only 4 percent in Orissa as against 70 percent in the states like Karnataka and Maharashtra. This suggests that variation in composition of landholding pattern of shrimp farmers severely effects the production as well as the productivity of shrimps. Hence, research on production and marketing of shrimps in Maharashtra becomes more imperative. The state land reforms Act, 1960 has not incorporated any benefits to the shrimp farmers in the costal districts of Maharashtra. However, the lease policy for shrimp fanners promulgated since 1980 may be studied to find out the amendment needed to suit the farming community for the development of shrimp culture in the coastal area. The post-harvest infrastructure available for brackishwater shrimp processing, storage, transportation, grading and updated market information is far below to the national standards. Therefore, urgent study is warranted to find out the actual need of the state to upgrade our processing efficiency. Brackishwater shrimp farming is influenced, and activated through intensive and super-intensive culture practices including monoculture and poly culture practices. The shrimp farm affluent treatment, hatchery and seed production techniques, reduction in seed cost, food cost and energy cost, treatment of different diseases, new trade policies specially on anti-dumping duties, certification requirement of USA, Sanitary restrictions of European countries and taxation problems, etc also influence production and marketing of shrimps. Hence, a research study is necessary to analyze shrimp farming in Maharashtra in comparison with other states of India and other shrimp producing countries of the world to ascertain the technological improvements designed for prawn production in the state. The significance of the study also relates to the reinterpretation and implications of the Honourable Supreme Court Order, 1996 to bring out the possible ways out with regard to Coastal Regulatory Zones (CRZ) and the restrictions on brackishwater shrimp culture in coastal. Moreover, this responsibility depends upon the investigator to ensure that the activity meets the requirements for the diversity of interests involved in sustainable development as contained in Agenda 21 of UNCED, namely, social acceptability, equitability, economic viability, technical appropriateness, environmental soundness and conversion of resources. Therefore, the present study on "Production and marketing of shrimps in Orissa” is undertaken to explore the research objectives:

1.4.1 Research Problem

Due to high demand for shrimp, shrimp unit can be profitable as there is sure production in a controlled management, however there is high capital investment, hence only rich people are entering in this business. If adequate capital and low interest is charged then there has been more shrimp units in the study area. The newly elected Central Government has made financial provision to the ‘group farming’ in the country but many poor fishing community does not know such provisions. This business at present is in the hands of few capitalists but actually the coastal fishing community which has no sufficient fish yield, can be trained in shrimp farm, so present unemployment problem of the coastal community can be reduced.

The shrimp farms are useful not only to the owner of the farm but also it helps to the laboring class around the farm, such farms are run in the villages near the coastal area. Therefore, the fishing community those do not have job in the marine fisheries; such people can get the work in the shrimp farms. There are some jobs for the women also. Thus, women can also get full time and part time jobs, as there are no any risk to the life of concern workers. The shrimp farms require few skilled and semi skilled workers, the people residing near by the shrimp farms can get the job. The rearing of shrimp and grading them, and giving feed, medicine and water management are the jobs which requires education, thus educated youth in nearby area will get the money income for livelihood. Due to increasing population as well as change in consumption pattern, there is high demand for the fish and fish product, as the marine fishery is open to anyone; hence there is no assurance of certain amount of fish production. As result of such situation, the hotel owners as well as city consumers are also not getting the sufficient sea food, but due to the shrimp farms all these customers will get fish particularly the shrimp. Therefore, the tourism and hotel industry in the cities as well as on the coastal area will develop. Another important significance of the shrimp farm is the advantages of getting the foreign currency by exporting shrimp. The quality and the desired quantity of shrimp can be cultivated in the shrimp farms.

1.4.2 Sample Selection and Data Collection

Sample Selection

The present study covers Ratnagiri districts in the coastal region of Maharashtra state. At present there are 18 shrimp units in Ratnagiri district.

Maharashtra has 720 km. long coastline which is estimated to have about 80,000 ha of shrimp farming area. However, after carrying out macro-level survey during the period of 1979-1982, an area of only 14,555 hector was found to be suitable for shrimp farming.

Table 1.1: Sample Selection

Districts	Tehsils	No. of Shrimp Units	Sample Selection
Ratnagiri	Dapoli	03	03
	Mandgangad	01	01
	Guhagar	05	05
	Ratnagiri	06	06
	Rajapur	03	03
	Total	**18**	**18**

Source: Socio-economic Profile 2017-18

3. Results & Discussion

3.1 Financial Management of Shrimp farming units

3.1.1 Land Ownership Pattern

Land ownership pattern indicates the financial status of the shrimp farmers. It also indicates the investment of the farmer in the ponds and in the shrimp farming business. Thus, the researcher has taken this question and includes the land ownership pattern in to three parts such as own land, lease land and own + lease land. The data is given in table 1.2.

Table 1.2: Land Ownership Pattern of Shrimp Farmers

Pattern of Ownership	Ratnagiri	
	F	%
Own Land	15	83.33
Lease Land	02	11.11
Own Land + Lease Land	01	5.55

Field Data

The data presented in Table 1.2 reveals that the respondents practiced shrimp farming on own lands alone are 81.25%, followed by lease lands alone which are 12.5%. The farmers who are using their own land and lease lands are 6.25% in the Sample districts of study area. It indicates that farmers need huge investment for purchases of land or the farmers who have their own land are doing farming.

3.1.2 Capital required for construction of shrimp pond

Construction of pond is one of the most important investments in the shrimp farming that without the construction of ponds it is unable to keep the shrimp seeds and to take production. Thus the researcher has studied this point to focus on the investment of the farmers for construction of ponds. The data is given in table 1.3.

Table 1.3: Investment in Construction of Ponds

Investment in Pond Construction	Ratnagiri	
	Frequency	%
<5 Lakh	02	11.11
5-10 Lakh	11	61.11
>10 Lakhs	05	27.78

Field Data

Table 1.3 indicates that majority 61.11% of farmers from the districts reported the construction cost from Rs. 5 lakh to Rs. 10 Lakhs, followed by 27.78% farmers who defined that the cost of construction of shrimp ponds is more than Rs. 10 Lakhs. Only 11.11% shrimp farmers defined expenses less than Rs. 5 lakhs that their ponds may be small and the cost of construction of ponds is based on the size of the ponds. With the above table it is realized that high cost of construction means large size of ponds and vice-versa.

3.1.3 Total amount required as fixed capital and working capital

Capital of the business works as the soul of the body that in the absence of capital, the business should have to close. The researcher classified this capital between two categories as working capital and fixed capital. In general the ratio of the working capital is always large compared to fixed capital. Table 4.24 indicates the classification of working capital and fixed capital required by the shrimp farmers in the study are.

RESULTS

Table 1.4: Classification of Invested Capital

Type of Capital	Investment Required	Ratnagiri	
		Frequency	%
Working Capital	<5 Lakh	02	11.11
	5-10 Lakh	11	61.11
	>10 Lakhs	05	27.78
Fixed Capital	<5 Lakh	02	11.11
	5-10 Lakh	12	66.67
	>10 Lakhs	04	22.22

Field Data

Table 1.4 indicates that working capital of the sample respondents is 61.11% which is between Rs. 5 Lakhs to Rs. 10 Lakhs of the sample districts, followed by 27.78% respondents who have required more than Rs. 10 Lakh as working capital. The required working capital in the study are is nearby equal. Fixed capital of the farmers is between Rs. 5 Lakhs to Rs. 10 Lakhs of the districts which is of 66.67% farmers, followed by 22.22% respondents having fixed capital of more than Rs. 10 Lakhs. Only 11.11% respondents have required less than Rs. 5 Lakhs in the districts of study area. It realized that in shrimp farming the ratio of required fixed capital is comparatively higher than working capital.

3.1.4 Owners' present net investment in shrimp ponds

Investment of the farmers is given in table 25

Table 1.5: Owners' present net investment in shrimp ponds

Actual Investment of Shrimp Farmers	Ratnagiri	
	Frequency	%
<5 Lakh	01	5.55
5-10 Lakh	10	55.55
10-15 Lakhs	04	22.22
>15 Lakhs	03	16.16

Field Data

From Table 1.5 it reveals that majority (55.55%) of the respondents have invested the amount of Rs. 5 Lakhs to Rs. 10 Lakhs, followed by 22.22% respondents who have invested the amount between Rs. 10 Lakhs to Rs. 15 Lakhs. 16.16 % respondents have invested the amount more than Rs. 15 Lakhs and only 5.55% respondents have invested less than Rs. 5 Lakhs in the shrimp farming. The invested amount of the shrimp farmers indicates the size of the shrimp farming units; lesser the investment means small units and vice-versa.

3.1.5 Sources of available capital

Shrimp farming units need large amount for establishment of business from availability of land till purchases of all types of basic material. The researcher has focused on this factor to know sources of capital used by the farmers to raise such amount of capital. Table 4.26 indicates the sources used by the sample respondents.

Table 1.6: Sources of Availability of Capital

Sources	Sources of Capital	Ratnagiri	
		f	%
Only Owned Capital	Only Own Capital	03	16.16
Own Capital + Other sources	Own Capital	15	83.33
	Friends/Relatives	07	38.89
	Cooperative Societies	12	66.67
	Banks	09	50
	Private Financial Institutions	03	16.16
	Others	11	61.11

Multiple Responses; Field Data

Table 1.6 shows that there are only 16.16 % respondents who have investment their own amount as capital for the business from the study area and remaining 83.33% respondents have used their own capital as well as raise the capital by using various ways of sources of capital i.e. financial support from friends and relatives, loans from cooperative societies, loans from banks, loans from other financial institutions, etc. There are 61.11% respondents who have taken loan from private creditors/ money lenders. Majority of the respondents are getting financial assistance from the private money lender which indicates that the financial institutions or banks, cooperative societies are not working properly of not giving sufficient amount of loan to the respondents.

3.1.6 Amount of Loan taken for shrimp units and Rate of interest

Table 1.7 indicates the amount of loan taken by sample respondents.

Table 1.7: Amount of Loan taken for shrimps with Rate of interest

Loan	Investment Required	Ratnagiri	
		Frequency	%
Amount	<5 Lakh	01	5.55
	5-10 Lakh	04	22.22
	10-15 Lakhs	07	38.89
	>15 Lakhs	03	16.16
Rate of Interest	No Interest	05	27.78
	<10%	07	38.89
	>10%	03	16.16

Field Data

From table 1.7 , it reveals that only 82.82% sample respondents of the sample districts have taken loan from by using various means, in which highest proportion is 38.89 % who have taken loan between Rs. 10 Lakhs to Rs. 15 Lakhs, followed by 22.22 % respondents having loan of Rs. 5 Lakhs to Rs. 10 Lakhs. 16.16 % respondents have taken loan of more than Rs. 15 Lakhs and only 5.55 % have taken less than Rs. 5 Lakhs loan. From all the borrowers 27.78 % respondents have no interest on their loan that they have taken such amount from their friends and relatives. 38.89 % respondents have to pay loan with Rate of Interest of less than 10% and 16.16% respondents have to pay the loan with interest rate of more than 10%. The rate of interest of government units is less than 12% but when the loan in taken from other private sources/money lenders, it is flexible according to the relations of the persons.

3.1.7 Government Subsidy

Government subsidy plays an important role in the development of the shrimp farming units. In case of any natural calamities, shrimp farmers get subsidy from government to cover the losses and to develop the farming units. Thus it has become necessary to study that how many farmers received the subsidy. Table 4.25 indicated the number of farmers who have received the government subsidy.

Table 1.8: Government Subsidy

Government subsidy	Ratnagiri	
	Frequency	%
Yes	16	88.89
No	02	11.11

Field Data

Table 1.8 shows that majority of 88.89 % sample respondents have received government subsidy after facing various natural calamities and 11.11 % respondents have not yet gotten any amount from government as subsidy, that these units may be newly established or not covered in the natural calamities.

3.1.8 Problems related to Finance

While carrying business units it is necessary to keep enough to solve the emergency issues. Many times it needs more money and farmers face the problems regarding it, thus the researcher has focused on the problems related to the finance and the collected data is given in table 4.29 in descending order.

Table 1.9: Problems related to Finance

Sources of Capital	Ratnagiri	
	F	%
Availability of funds	15	83.33
Insufficient working capital	12	66.67
Underestimating startup costs	07	38.89
Late client payment/ bills	09	50
Mispricing of products	03	16.16
Bad cash flow management	03	16.16

Field Data

Table 1.9 focuses on the financial problems of the sample respondents in study area, and it reveals that the problem of availability of funds on time is faced by 83.33 % followed by the problem of insufficient working capital by 66.67 %, 38.89% respondents are facing the problem of underestimating startup costs and 50 % facing the problem of late payment of clients/bills. 16.16 % and 16.16% respondents are facing the problem of mispricing of products and bad cash flow management respectively. It indicated that the farmer should have the sufficient knowledge regarding the shrimp farming units or have to take proper training regarding the management of shrimp farming units. Otherwise have to face such type of problems while running the business.

Findings on Financial management of Shrimp Farming units:

1. It indicates that farmers need huge investment for purchases of land or the farmers who have their own land are doing farming. Table 1.2
2. It is realised that the shrimp farming units need more capital for construction of the ponds. Table 1.3
3. It realized that in shrimp farming ratio of required fixed capital is comparatively higher than working capital. Table 1.4
4. The invested amount of the shrimp farmers indicates the size of the shrimp farming units; lesser the investment means small units and vice-versa. Table 1.5
5. It is found that the respondents are getting financial assistance from the private money lender which indicates that the financial institutions or banks, cooperative societies are not working properly of not giving sufficient amount of loan to the respondents. Table 1.6
6. The rate of interest of government units is less than 12% but when the loan in taken from other private sources/money lenders, it is flexible according to the relations of the persons. Table 1.7
7. Table. 1.8 showed that the shrimp farmers have received government subsidy after facing any type of natural calamities.
8. It is realized that the shrimp farmers are facing various problems related to finance, i.e. availability of funds, insufficient working capital, underestimating start-up costs, late client payments/bills, mispricing of products and bad cash flow management, etc. Table 1.9

3.1.9 Suggestions

The production and productivity of shrimp vary from place to place, farmer to farmer and culture to culture depending upon application of inputs, use of technologies and management practices.

Suggestions on problems

1. Make availability of provisional license and issue of permanent license in a particular period of time. Also provide patta to reserve/planned lands and leasing of lands for shrimp farming
2. Government Research Institutes should be set up for more and qualitative hatcheries and virus free Nauplius should be supplied to the private hatcheries.
3. There is need of safe guard shrimp farmers' interest for full fledged microbiology lab and technical guidance and thus it needs Cooperation among shrimp farmers.
4. The disproportionate land holdings of the shrimp farmers also greatly affect the growth of shrimp production, thus the government should take necessary steps to promote for production, marketing and trade of shrimps.
5. The state government should organize the programs for Planning, Monitoring and Evaluation to co-ordinate, analyze and offer training to the existing and new shrimp farmers of the state for the growth of shrimp farming.

4. Conclusion

Shrimp culture is the best alternative for the coastal fishing. It has more demand in the national and international market rather than coastal fishes. But due to the increasing demand of shrimps, it is necessary to the shrimp farmers to make regular supply of shrimps in the national market. There is also absence of facilities to export the material in the international market, thus the farmers are unable to supply it in the international market. Government of India has to focus for the export of the shrimps which will be resulted into the development of the shrimp farming units.

The small and marginal farmers in the shrimp farming have also great importance in the shrimp farming. Land holding pattern of shrimp farmers in the coastal area of the Maharashtra state is increasing by providing liberalized and subsidized finance by the banks and the government. But the role of banks and government should have to increase for the development of the shrimp farming.

To increase the marketing as well as the export of shrimps, the following improvements may be instituted like proper product packaging as per the requirement of the customers, quality maintenance according to international market and HACCP principles, inclusion of shrimp as a dish in the menu of the hotels, introduction of sachet sells, establishing kiosks in markets and highways, creation of super market chains and market linkages and a Fish Consumption and Promotion Board (FCPB) in line with NDDB.

To make improvement in the quality of shrimps, there is need of trained and well skilled labours for shrimp farming units. Majority of the shrimp farmers had not undergone any specialized training on shrimp culture practices. Hence, there is an urgent need to train those shrimp farmers. Besides there should be a regular training program for the development of shrimp units which should be organized by Government at research centre related to the major issues of shrimps. It is high time that the scientific community and the shrimp farmers' community work together to find solution to many nagging problems and develop skill in every aspect of the shrimp industry.

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IMPORTANCE OF EDGE COMPUTING IN IT

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ABSTRACT

This literature review consists of the details of the emerging cloud computing technology, how it is being used all over the globe to solve real world problems in an efficient and standardized manner. It also covers the main global focus on the concept, architecture, features and implementation of the technology of 'Edge Computing' and how it being a sub category on the parent cloud computing technology holds a vital role amongstthe future prominent technologies solving critical issues being faced in the technological world. Through the power of edge computing in relation to deep learning, how security is a major concern on edge devices at the endpoint. The various natures where edge proves to be the vital difference between calculations and response timings. As the world keeps improving, the technological accuracy and efficiency also plays a big part into the development cost and why even if a technology is costly, needs to be maintained and implemented because of its benefits and low disadvantages, much like edge computing.

Keywords: *Cloud Computing, Global Focus , Technological World , Edge Computing , Accuracy*

1. INTRODUCTION

This literature review should cover all the basic topics in relation to Edge computing its advantages and disadvantages. It should give an overview of the idea on Cloud Computing, moving onto Edge Computing and its many services and technology. It covers the various popular versions and improvements on Edge Computing even for mobile devices. How it provides the edge to research and innovation through IoT and deep learning integration as well. As human beings start to evolve they start to explore, upon exploring, they come across various previously unknown data and they note it down, data was hard to be shared between fellow humans of different countries.(A. C. Baktir, A. Ozgovde and C. Ersoy, 2017) With the rise of data sharing with the help of the Internet technology as usage of data sharing boosted, so did the volume of the total data all across the world, the global impact and rise of the total data being a surplus to access within fast time. Datain bulk are now being used to even learn faster, understanding patterns throughout the entire data and creating calculations based on those analytical results. Thus followed the rise of IoT devices as well, according to a study of usage statistics, it is seen that the global use of IoT devices crossed 6 Billion during 2019. From the impact of the recent covid19, as people have been heavily dependent on technology now more than ever, the usage and development of IoT devices are even more now. The fact being the total processing time to process all these data in order to quickly render accurate calculations are getting even harder as time goes on and hence the emergence of edge computing. Although the CDN processed the data correctly and at a reasonably fast rate, it was monitored from a central cloud server. Edge computing processes the data being produced by the IoT devices at a far faster rate and is not centralized in nature as well.

The concept somewhat being able to be closer at every front of the world where there are usable data generated IoT devices at work in order to bridge the gap between the cloud and the user decreasing any latency issues with calculation or data transmission and even improving user experience all together with outstanding proficiency in performance. Cloud computing and CDN could handle self-automated home devices but when it comes to the accuracy and efficiency of the reaction time edge computing stands out above all. The best example being, it does not matter in the world of football, if a certain goalkeeper is the tallest in terms of height, the award for the best goalkeeper always goes to the person whose reaction time was the fastest, even in critically tough situations saving a goal from happening or making a vital difference even before mishapsbegun. These features of edge computing always stands out in terms of other technologies even and especially for organizations having to use a reduced bandwidth.

2. JOURNEY TO THE CLOUD

Industrial age proved an un-denying fact of humankind's search and desire for more power. Developing devices that could handle complex algorithms and processing faster to produce accurate outputs. By my research considerations, travelling through the contributions of Alan Turing directly to Larry Page and Joseph Carl Robnett Licklider we land in the age of Cloud Computing and AI. Discovery of these two concepts have led to amazing breakthroughs in the field of speech recognition, automation, data recoveries and application integrations. Benefiting from these concepts have led several new industries to flourish including video monitoring, smart television devices and human-robotic interactions making a positive impact on society and daily lives. The number of devices connected to the internet rose significantly. Cisco Annual Internet Report clearly pointed out to the world that by the year of 2023, we would be experiencing an approximate 5.3Billion of global internet users, per capita being 3.6 and an average fixed broadband for global would be around 110 Megabytes per second. Based on the massive growth of data in the information technology age through the power of the internet various data processing requirements are of high demand ultimately leading to flexibility and scalability of usage through cloud computing.

The designers of the concept of cloud focused themselves on targeting starting peers on the way thousands of nodes are connected to each other on the internet. (H. El-Sayed, 2018)The main reason why the term cloud had been given relates to its inner architecture of the cloud. A cloud would consist of densely clustered water molecules (H_2O) much like with a dense cluster of computers which works together and appears in such a way that, to a normal observer or user they all appear to be a single giant powerful computing object with a lot of resource power. It can also be explained as the on-demand delivery of Information Technology resources through the internet. It strictly follows a pay as you go mechanism with added benefits of low overall maintenance costs as compared to actual onsite servers. Organizations or Industries of every type or size are using cloud computing as one of their key structures for several different use cases. Cloud Computing in addition to maintenance also provides several internal services like data backup, email, virtual desktops, disaster recovery, big data analytics, software development and testing and even web applications. On a large scale, there is virtually no upfront cost. Instead of buying a 100GB HDD having to buy more upon demand, the users would be using the concept of shared resources. Hence renting, a part of the hard-drive, a part of the bandwidth cost of the data-center and some of the power cost of the PC its using in the cloud. The biggest challenge that cloud computing faced during its initial launch was the cost. A person with a background in technical knowledge can easily buy separate hard drives forming RAID1, setting up an FTP server and forwarding the appropriate ports on the router. This would enable the person to utilize the approximation of five times the HDD space as compared to the space cloud companies are providing users with, without multiple monthly payments. However, the initial cost reduction aside the person has to be technically capable of maintaining and paying for all the money upfront with bare to minimum scaling facilities offered upon need. Not to mention, the services offer data protection. Hence, cloud being not limited to the person's bandwidth and providing a hassle free environment with variable expense technology appealed at a mass scale.

2.1. WHY EDGE

With the needs of people gradually increasing at a rapid rate along with intelligence in technology and environment, devices are spread all across the continent. These devices often referred to as Edge devices form a futuristic network with advanced nodes based on the several forms of distributed concepts to conjure up small stations for higher performance. (H. El-Sayed, 2018)Nowadays, with intense data accuracy, demand for the highest ultra-speed is at the maximum polls and this is where Edge computing comes in. The main purpose of the architecture being to shut off all forms of latency to the maximum possible extent between the servers and the nodes providing advanced services and calculations at the network edge. Moreover, Edge wireless devices aims to provide the stable and smooth data organization with multitude of bandwidth and access to advanced computational resources. Leaving the future prospects of growth and real-time response more smoother.

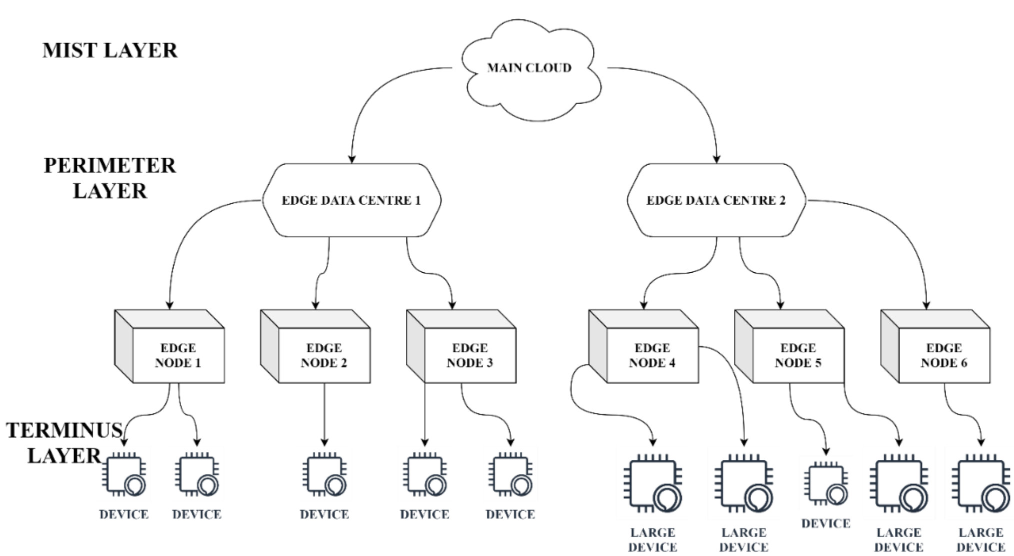
3. OVERVIEW OF EDGE COMPUTING

The architectural cloud in cloud computing set by the founders of the concept of cloud computing focuses on it being mobile and reliable but faces a bit of latency issues when the right servers aren't available. This is where Edge Computing comes in(K. Cao, Y. Liu, G. Meng and Q. Sun, 2020), the very concept of edge computing in relation to the normal form of cloud computing seems very different to begin with. The Edge clearly defines the end-point, which defines the rest of the network. The core of the entire technology of edge computing relies on the idea of placing computers at the edge to bridge the distance between the source and the computer altogether, hence given the nomenclature of computing at the edge. The two links between the data transfer, namely the downlink (cloud service) and the uplink (IoT) handles all the network edge node execution.In general, IoT devices conjure up and gather so much data that the sheer volume of the entire data requires larger and more expensive connections even in comparison to other cloud computing networks. Edge computing advances mostly for critical time and helps in automation as well. For example, sensors in the core of a nuclear power plant or the valves at a petroleum refinery are always in a constant state of detection of any irregularity in its mechanism. According to those critical inputs, shutoffs are triggered after proper analysis of the response data. If automation is set up in the distant processing centers, the automatic shutoff function is triggered but the response time could take a multitude of Nano-seconds, which hinders calculations. However, with the power of edge computing, the processing powers are usually localized to the end devices, having low latency and that response is much faster. Hence, saving downtime or damage to any property or does not affect any critical calculations.

Even if the devices were at the edge, there would still be a need to connect themselves to datacenters. Data Centers could be placed either on premises or off premises (in the cloud). Edge devices can collect data, sort themselves performing predetermined analysis of the data, and send the acknowledgement quicker than general cloud computing architecture would even provide.Hence, the facilities provided by Edge Computing generally refers to faster processing and slows the growth of expensive connections in relation to storage centers. With every power comes the issue of security and privacy. Although edge computing could be considered a more advanced subset of cloud, computing it much like its parent follows more or less the same prerequisites of privacy. When it comes to security, since most of the data is collected at the edge (IoT devices that connect to the edge devices), the highest form of security must be placed there instead. If one edge node is compromised, there is a possibility of the vulnerability of other nodes in the network. Network architecture needs to be set up at the edge in such a manner that supports backup and contingency plans in order to avoid network down time. The technological industry has gone a long way in investing heavily in edge computing and are making significant strides so far growing by largescale day by day. The entire technology would grow as real-time applications are utilized more.

4. ARCHITECTURE ON THE EDGE

Many researchers have defined the exact architecture of Edge Computing in many ways. But, the core parts of the architecture always boils down to three essential layers, (H. El-Sayed, 2018)Edge Device Layer also known as the user-end layer, Edge Server Layer also known as the Edge node layer and of course the Cloud Server Layer respectively.



The Terminus Layer: Also, referred to as the terminal/Edge Device/User-end layer consists of many devices that individually connect to the network. IoT devices are also included. Altogether, they not only consume data but also provide data for others. Here the device computing power does not calculate especially in order to reduce the overall delay. Therefore, this layer is responsible for hundreds and thousands of data inputs and uploads it to the next level layer for proper analysis and storage.

The Perimeter Layer: Also, referred to as the Edge server/Edge node/Boundary layer is the very holding piece that binds all the other layers. The servers that establish at the layer involve edge base stations, gateways and access points. This layer is responsible for supporting all entry, storage and computation of data given by IoT or other devices connected to the network. Since, the layer bridges distance between the devices and is close the calculation is suitable for real-time. After the analysis and calculation is, too heavy it would divide the work between other servers for faster processing or to a station possessing more computational power. Finally, control flows are automatically set and results sent to the end devices upon completion. This layer is responsible for holding the central security and authentication as well as data calculations, task separation and even data storage.

The Mist layer: Also referred to as the Cloud/Cloud Server layer. It is responsible for hosting the cloud and other data centers. Although the layer beneath is responsible for all the analysis and authentication part, this layer holds the most critical security algorithms. It also consists of huge arrays of powerful high performance machines and storage capable devices. If a data is so huge that, even dividing the entire data between other edge servers in the perimeter layer is not enough, this layer could also provide a helping hand and integrate itself with the global information and does analysis of tasks whilst adjusting several algorithms to come in conscience with deployment strategies.

5. SERVICES ON THE EDGE

Providing everyone with on demand computing or storage services in relation to minimum latency on a centrally located legacy network is probably the best service of Edge Computing. It also supports a high number of nodes over any geographical area. Apart from the standard cloud computing services. Implementing intelligent workflows and automation into the edge drives faster processing capabilities with smarter and more dynamic operations. (J. Pan and J. McElhannon, 2018)By enabling Artificial Intelligence, it helps to give many insights into the point of operation. Since, there are many ranges of Edge devices available to us with more innovation incoming, thermal seniors or wearables may be able to identify persons or patient’s health conditions quickly and alert safety concerns. Thus, researching with insights and integrating them with Machine Learning would ultimately benefit the automation process to a completely new level. The seamless integration of edge with advanced reinforcement learning technology provides accurate control mechanisms increasing rewards by hunting for policies for mapping of actions. Reinforcement Learning helps in speeding up critical thinking and decision-making processes enabling advanced automated communications and data analytics. From the general already included services of the cloud, edge computing provides a standard level of load balancing, migration and virtualization much easier with reliable goals and accessible by all hardware devices.

Looking at the top cloud computing companies of the modern era in no particular order who is focusing their core technological services into edge computing. We discover a bunch of extra-specialized services that feature edge computing to be utilized in a different manner back hauling the general traffic by making data more accessible with ultra-reduced latency to drive through the core application platform. Data could be even categorized as micro data for the users responsible for analytics and statistics. 'Mutable Inc.' is taking the world into a revolutionary journey by improving the public edge cloud to be capable of handling the next generation applications like Drone technology / VR and IoT etc. capable of expanding the use of the public cloud overall. Compute points must not be wasted and hence it automatically prioritizes the workload to channel itself with the rest of the points and sells them to people who need it through the public cloud. 'Ori Inc.' is leading the way when it comes to the mobile edge computing platform much like 'MobiledgeX' as a Platform as a Service middleware service company. Its main services relying heavily on dynamic orchestration of their applications. However, what stands out in their implementation of edge is that their core vision is mostly for the developers with a fully customized integration with an analyzationtool, which displays the statistics of various edge servers in local areas as well. 'Hangar' have also dived into the world of robotics with the edge architecture of Robotics as a Service enabling it's personal drones to use the edge network to navigate and not need any or minimum human interaction overall. Partnering with VaporIO and enabling the use of hyper local, micro and macro data centers within a limited infrastructure so far, the entire technology is gradually increasing in worth and implementation as well. These were just a few of the several services of edge computing as the standardized method following the anything as a service model the applications and the strategy of developing with edge at someone's disposal is limitless.

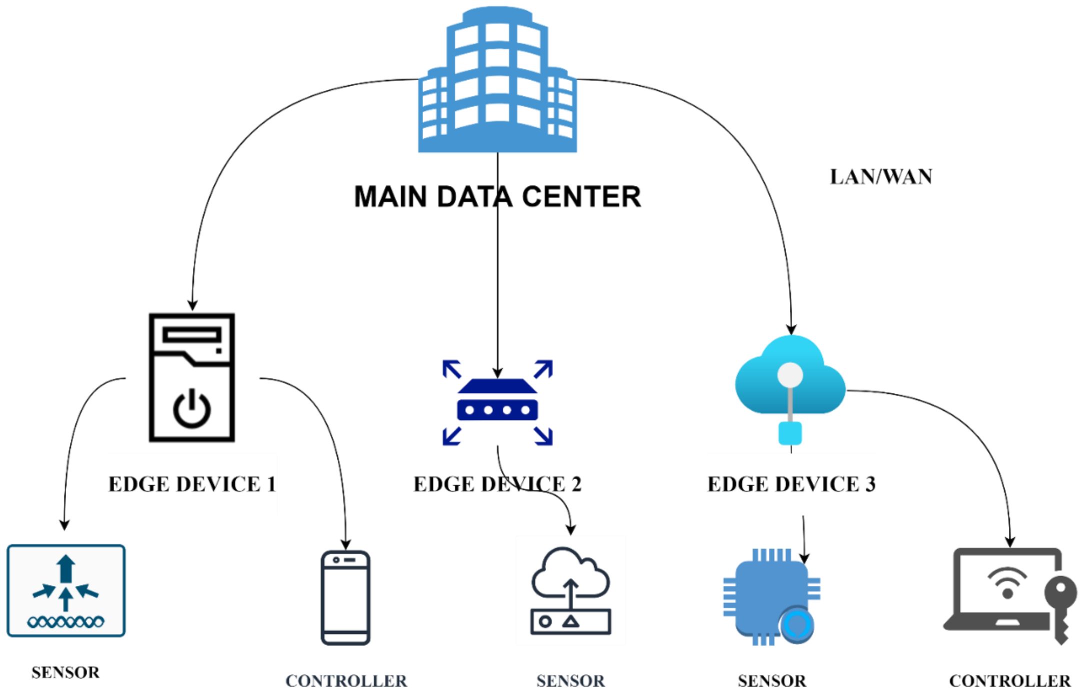
6. MOBILE EDGE COMPUTING

As both edge technology and market requirements rose, edge computing turned its interest towards deploying towards mobile devices and connections (latest 5G infrastructure) within Radio Access Network. The enterprises and service providers figuring out ways to monetize the entire field are making a tremendous investment into this technology including spectrum costs. The entire consumer base built on the possibility that users would invest more in buying new faster network capable items, which is unrealistic. With the invention of the MEC, service providers such as Netflix or Google Inc. heavily invested into buying that service from the respected service providers in order to utilize that technology onto their network for faster streaming, low to negative buffering capabilities for their servers at the edge, turning MEC to a more enterprise customer base for revenue growth.(A. C. Baktir, A. Ozgovde and C. Ersoy, 2017) Although while deploying the X86 infrastructure and applications running on top of that at the edge, the challenges faced by the service providers are mainly in relation to scaling. MEC provides greater efficiency, low power consumption, computer performance and low latency even over edge computing with the reduced cost of transport. Among the nonprofit regulatory organizations, European Telecommunications Standards Institute has set the global requirements and standards for Mobile Edge Computing. Service providers may contact the respected operators willing to negotiate with their wireless network edges to other authorized and verified third parties to deploy services and apps for mobile users. Due to the gradual growth in mobile traffic as seen over the last few years, location awareness with reduced latency and low power consumption has always been a priority.

In the world of cloud computing on the edge and the 5G rollout, users are in demand of extreme capacity withstanding the current and even more demands of a faster and more stable network. The phrase minimal latency nowadays being used by edge computing are slowly being replaced by 'no latency' meaning the standardized telecommunications union upon rolling out several powerful core technologies integrated with the power of edge computing would declare no latency issues at all. Data rates being shot up to 20GBPS with less than 1MS of latency is negligible to a normal user but with users or developers eager to invest into the department, the entire codebase is an entirely distributed environment that is used to deploy services as well as applications and upload and store content at nearby mobile user locations.(S. N. Shirazi, A. Gouglidis, A. Farshad and D. Hutchison, 2017) Especially, with virtualization at the edge of radio access network the network operators can allow multiple third party vendors and companies to utilize the rest of the space to create a distributed but a standard low latency model around it. 2017 being the year of mobile computing established its way of dominance when anISG published a standardized content, which was divided into functional and nonfunctional content. The functional concepts covered the areas of energy efficiency, packet losses, latency and throughput of QoS. While the nonfunctional areas of course covered the concepts of satisfaction, availability and reliability. The core network of the entire technology depends on its capability to adapt with mobility and serving potentially billions of devices simultaneously and dissolving any issues with congestion at the internal network and hence the focus on 5G right now, instead of older network architectures. Utilizing cloud like resources and mobility management this would help the operators increase their overall service quality. Although there are always concerns about security and privacy of any technology in relation with downtime and potential loss or damage, there are significant improvements and standardizations are slowly beginning to be set.

7. IoT IN EDGE COMPUTING

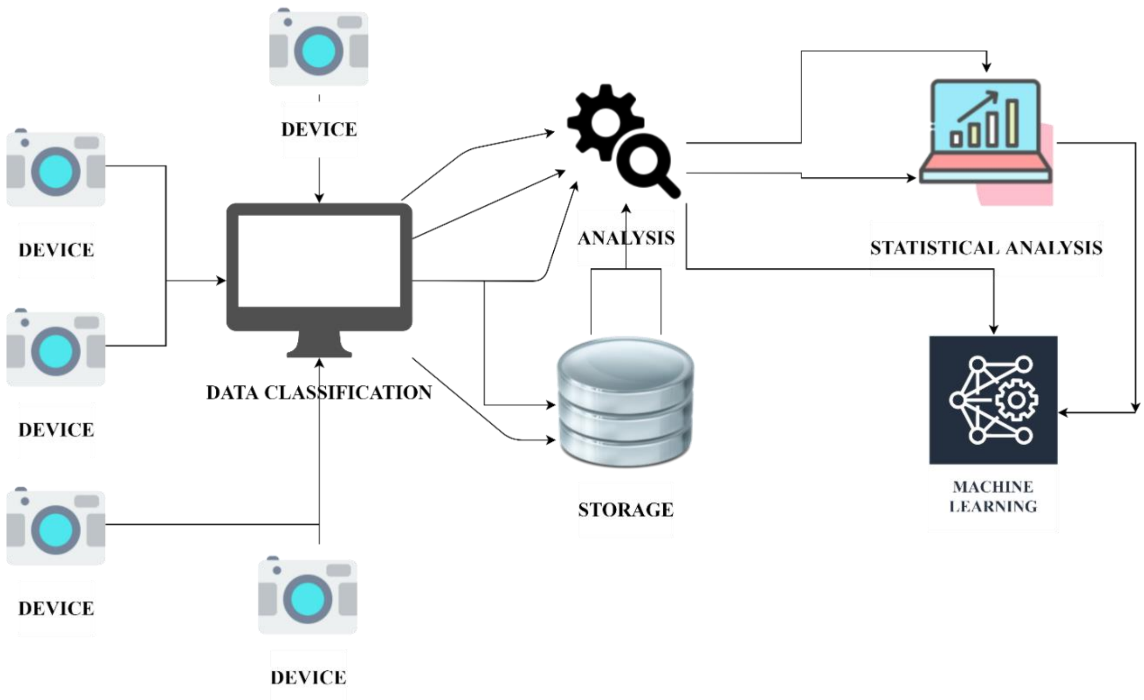
The term IoT has different perspectives for different people. In general, IoT could be defined as physical things that are augmented with actuators, network connectivity having computing in mind. As the rapid growth of technology demands higher access to nearly every technological device the very concept of IoT is becoming more and more relevant in the modern world. Mobility being the key, electronic watches/pulse meters are all connected on a network. This helps in accurate data collection for knowledgeable information, which are processed in real time. In terms of several identification mechanisms for enhancing security and privacy, the very phone locks that we use have to respond to a frame in one-tenth of a second if not less to be worthwhile as a real world application. Through convergence of many big picture technologies such as IoT and ML, it is a lot easier to scale at large at multiple network edges with even having on demand computational capabilities and diverse usage and access. Although there are some issues like high-resolution images processing in high volumes being one of them, as technically challenging. The MEC and ML architectures are providing a huge cooperation to better understand and implement these technologies.



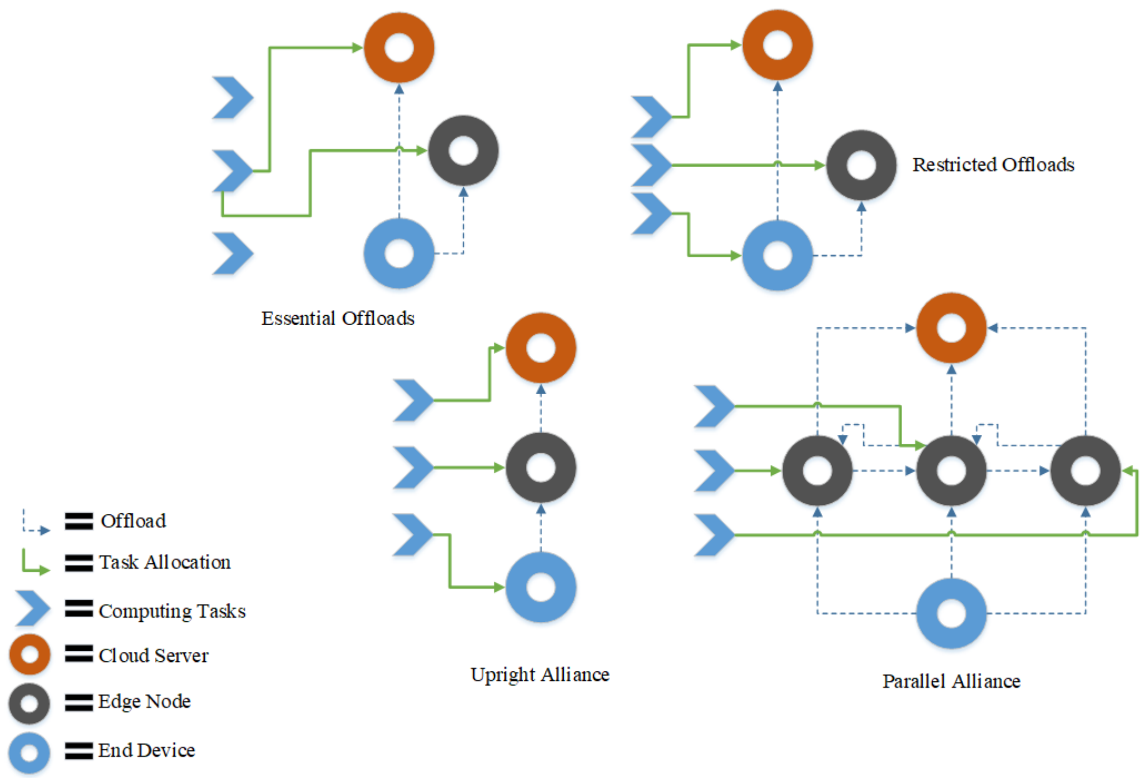
IoT uses all the things that we currently possess. The vast amount of data that is collected from the devices are to be intelligently processed with low response time and maximum accuracy, this is where Edge Computing comes in. Edge computing takes out the distance from the very start, more or less all data extracted from the devices are happening at the edge and all information is processed via the cloud/fog layer into the knowledge section. This is the basic foundational process of the power of edge computing clearly outranks that of a simple cloud computing based industry.According to the recent study by the big tech giants RedHatInc. without the power of edge computing IoT would simply be operating under the networking capacities of a cloud or datacenter. As IoT devices needs more attention towards packet transfers than normal technical requests, the communication back and forth between the servers would result in slower response times and less operational facilities affecting network bandwidth as well. Edge computing powered by several complex deploy analytics algorithms enables this communication to flourish even under stressful server responses and data is pre-avertedly aggregated together before being sent to a centralized server for further enquiry and analysis. For example, to operate/analyze routes and calculations of an autonomous vehicle. It need to process the analysis and the requests in real time faster than most other operations as the vehicle speed increases down the road to reach its destination, it is constantly given the operating and decision making choices of which odds to calculate further in favor of a safe and smooth journey. If the vehicle were in need to turn or make a stop sending data back and forth between the vehicle and the cloud would prove costly. Allowing the processing speeds of the edge it could pick up the local request and process faster allowing the IoT sensors to process in real time and avoid an accident. Edge being separated into the categories of Thick, Thin and Micro proves to provide a more economical benefit to this as well. While cloud provides a fixed plan to maintain the resources with a pay as you use model of approach, it may not auto switch between the network traffic at real-time for more performance. Especially for moving vehicles,(M. S. Elbamby, 2019) the fact that the communication does not need to happen from the centralized point of view proves the difference amongst IoT sensor load. The sensors would firstly choose the thick load to boost their analytics and once it starts moving, according to its speed it could analyze the little variations of the minor details with edge using the thin or the micro services that edge is categorized into. Intelligent controllers and networking equipment could help determine the road to follow during the travel and the onsite traffic load that each road is facing at that point in real-time, while micro service could indicate the usage of edge to calculate the distance between other vehicles and the road and the stop signs and so on. As theIoT, devices increase their capabilities with edge the technology proves to be the difference in the market in an economical fashion by switching to the minor networks when needed hence, it being a flexible customer first technology altogether.

8. DEEP LEARNING WITH EDGE

Even for anyone, without being an expert in deep learning, it is clear that a lot of processing power is needed just for learning and proper implementation of deep learning onto the edge network. As we know, the power of processing and ability to respond in real time in edge computing is what drove the subset of cloud computing to rise above as a prominent technology. When referred to edge in deep learning methodology being implemented with edge, it usually means the computational power performed locally on the user side item.(X. Wang, Y. Han, V. C. M. Leung, D. Niyato, X. Yan and X. Chen, 2020) Deep learning mechanisms are costlier to implement and thus edge devices carrying those modules would in fact be a lot more costly and unaffordable. It being complex and tough to compute, services are used for handling requests through data centers. The field of online virtualization has shown a lot of prospect in implementing deep learning, having synchronized the complex deep learning algorithms for real-time video analysis, surveillance and augmented reality. The model of deep learning is to integrate itself with the cloud model. The cloud is responsible for stability in the system and updating parameters of models to achieve a global knowledge penetration. The cloud can thus provide a bit more insight into the specific integration for edge nodes to update the deep learning models. When large-scale datasets are provided the DNN becomes more accurate. With the dramatic rise of costs and outstandingly accurate result oriented tasks, it is traded off within a resource constrained edge network. Offloading of deep learning execution tasks and optimizing the frameworks are just but a few implementations of deep learning at the edge.



Thinking about the concept of why deep learning is at the technological core of advancement,(H. Trinh, 2018) one has to come to conclusion that everything nowadays depends on speed and artificial intelligence hence the more the demand for speech recognition or translation of languages or decision making the more deep learning should be enabled to handle the process. Researchers discover topics that enable them to make the next step in their research whereas deep learning is the automation of that process. The only difference being that human beings need rest but are not limited to RAM or ROM whereas deep learning solely depends its entire performance on energy, compute points and bandwidth. The wright brothers invented the plane in order to speed up the delivery of one person when travelling, the same concept is now being applied through edge computing to speed up the deep learning process to compute even faster than anyone thought before. Whenever movies have addressed a more futuristic view of our planet and civilization. They have enabled the thought of automation of multiple objects including heavy equipments. Thus, the demand of automation through the integration of smart city deserves deep learning to perform at its best in every possible area applied. Through the power of both edge computing and deep learning, it is believed that the futuristic reality would be achievable. Smart cities would need deep learning inference and applications on the edge to perform navigation and maintenance in real time, having privacy constraints and optimization of the edge for computational offloads. The need of larger scaled datasets and complex architectures indirectly requires the cloud infrastructure to keep increasing their computational costs. Edge combined with deep learning would not even need cloud to start supplying the computational requirements at all. On input of data, would reduce the searching space from the raw input picture be still or video and run inference algorithms to ensure that the entire image does not need to be processed, rather a specific region or the ROI. The ability to deploy systems like this at large scale dramatically increases the potential of the overall system development and the standard of safety and living even in remote places completely disconnected even from the massive computational powers of the cloud.



To handle the number of collaborations and offloads frameworks like Tensorflow and Py(Torch) models got developed to adapt to the edge configurations with the best suitable computer resources and data. If the upload data is needed in essential priority it might switch to FL but DL models follow their own architecture all together to integrate with the edge devices.

9. EDGE COMPUTING AREAS OF SECURITY AND PRIVACY

The essential need of data privacy and security of any data centric technology has always been critical. Edge computing is open nature and the powers of decentralization asks for the need for proper authorization and authentication. The security measures must be lightweight and easy to implement as well. When dealing with a multitude of edge nodes, it is very important to distinguish the correct routing path. With trusted network topologies, structures not running into a malicious DDoS edge attack (disruption of normal services by trying to gain access to a cluster of edge devices, sending streams of malicious packets from a compromised distributed device even for flood-based attacks) is highly likely.(D. Liu, Z. Yan, W. Ding and M. Atiquzzaman, 2019) Data is collected at the edge from edge devices also provides a massive impact on data privacy. Data could be in the form of location, bank records, recent visits, even health related confidential data hence are at a high risk if the original set of data records are incoming directly from the edge nodes. Keeping that in mind, there has been a significant amount of investment into boosting security and data privacy over the years. Many software and security encryption patches have also been deployed like proxy re-encryption, attribute and homomorphic encryption, which allows someone to perform complex calculations of an already encrypted data without any form of decryption.

Even with the encryption models network stability, flexibility and availability must be kept intact across the entire network. It boils down to the responsibility of the cloud service provider to ensure that the security patches are regularly updated. In case of any malicious attacks, there must be extra security measures and prompt detection to limit the effects on normal operation. Irregularity event detections should be deployed so that alerts can be issued whenever the behavior changes for any node. Although there have been significant improvements, edge security is still at an evolving stage. (Y. Xiao, Y. Jia, C. Liu, X. Cheng, J. Yu and W. Lv, 2019)The IaaS model requires the consumer to patch updates to their respective software or data, while the cloud service provider is responsible for the underlying abstracted resources, thus penetration detection is a key factor here. In fact, if a customer decides to pre-encrypt their data and send it for data storage, the encryption of a third party server would not enable them to perform search functions for finding related files later on. Thus, searchable encryption was invented. It enables privacy and search-ability of cypher text data to support any queries launched by the customer later on.

Apart from increasing security for edge devices, identity authentication for a single or cross domain serves a huge part in security. The entire architecture being a distributed interactive computing environment, it is essential to establish a mutual form of authentication through deepened search algorithms from trusted domains with special form of digital certifications. Achieving cross-domain authentication through a time controlled tree-level hierarchy with generation of key layer at the top level of the architecture. Every key must have a specific period before their key validity expires, providing feasibility and efficiency.

As data centers are responsible for collecting the geographic locations of different users, high mobility combines into a different form of challenge for security measures. A particular data center cannot be in charge of collecting digital authenticated information about the users' locations, making any form of centralized authentication mute. Handover technology was researched providing strong real-time authentication of edge devices by handing over the encrypted device recognition patterns to a different data center when the geographic location changes for a particular user.(Z. Zhou, X. Chen, E. Li, L. Zeng, K. Luo and J. Zhang, 2019) This is an increasingly difficult point, when the security needs to be dispatched and handled at the edge nodes and is still the subject of thorough research from around the globe. With all the tools that are already available, it seems seemingly difficult to encrypt and patch a certain encryption without it causing a significant delay in the network standards of edge computing. Protection still needs pupilage, it is certain as more AI, ML is integrated with edge, and edge mobile computing the quality of processing as well as the security mechanisms would have a significant improvement.

10. CONCLUSION

We have seen that the increasing necessity for performance is driving technology towards automation and thus leading towards edge rather than just cloud far more than before. Edge proving to provide the difference even under stress and complex decision-makings. The overall architecture of the cloud helps the network to be flexible and edge provides the real time performance support that was needed to operate in higher performances. Keeping in mind that the entire technology is being build using subpar network facilities until date, it still being mostly in research mode for the higher integrations like deep learning and the fragmented learning technologies and their frameworks so far. The entire technology is less dependent on its own, increases the profit and reduces the risks that cloud provides, leaving the future of technological advancement safe indeed. In conclusion, it is addressed that the future of heavy or light networking, software services and deployment are entirely dependent on the advancements of cloud computing at the edge. According to the advancements in the technological fields, if the prices were to be dropped even further as industrial standards improve, then edge computing would rule for the next several decades and improve security and data protection even more. When it also comes to security, the increased performance and less timing is a genuine proof to increase the security levels much higher than it is. Even leaving the servers less exposed to DDoS attacks and tool clients, not giving time for the attackers and leaving monitoring to real time. Edge distributes processing, storage and applications across the wide range of platforms making it very difficult for a single range attack. Although, research is going on into the point of entry into the edge network through the edge devices, as access to those networks are at the point of time left a bit vulnerable but the performance and reaction time well enough makes up for it. As time passes and more research and advancements are made to the overall architecture of technology, edge would not only help the world but also give other technologies the ability to perform at the highest of levels providing business growth situated nearer to end-users. Less expensive, easier to maintain and no longer needing companies to be centralized or have private data centers, edge proves to be the difference between other one-track focus driven technological advancements and versatility for its reliability. Shifting the compute speeds to the edge network would also help the business owners in scalability and advance the growing number of IoT devices overall as well. Agility is in its very definition. With more advancements in the usage of internet and even in Blockchain with a more innovative approach, everyone is just scratching the surface of what edge computing has in its store so far.

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IMPACT ANALYSIS OF TECHNOLOGY ADAPTATION IN STOCK TRADING IN INDIA DURING PANDEMIC PERIOD

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ABSTRACT

The simplicity at which one can now invest directly in securities, as well as the low prices associated with it, has attracted hordes of young people to take a chance on the markets. Brokerages are not only putting in place cutting-edge technologies, but they are also delivering a variety of value-added offerings such as analysis and trading classes, which are attracting a huge number of young people to their application or apps and sites. Further, those in smaller towns will now try their luck, it just thanks to increased internet penetration. Indeed, technology has become so important in today's world that new-age discount brokerages seem to be gaining significant market share. The ease at which e-KYC can be completed has aided brokers in expanding their client base. This research observed that Investors opened a staggering 14.2 billion new DEMAT accounts in FY21, up threefold from the previous year. The present article shows that internet and mobile stock trading is expanding and will continue to do so as increasingly affordable cellphones improve mobile stock trading activity in the near future. The mutual fund SIP (Systematic investment plan) system is also discussed in this study, as well as its impact on individuals changing from traditional investing approaches to technology-based stock trading, thanks to technological improvements that have made stock trading easier.

***Keywords**: Financial Technology, Stock Market, Investors, DEMAT Account, Mobile Trading*

Introduction

(Aldyan et al., 2019)Technology advances as a result of the globalization age. Various parts of technology have altered as a result of advancements. Indians are also going through a period of transformation, which includes demonetization and digitization. Demonetization with digitalization has resulted in the fast acceptance of e-wallets, credit and debit cards as payment methods in a relatively short period of time. Such digital payment use is now commonplace. It also has an impact on economy, such as the development of new commercial activities such as software, hardware, and other electronical systems that support business, such as an online trading system. Because of technology-based applications, the stock trading system in the stock market is advancing rapidly. As a result of this improvement, trading got easier for participants. Furthermore, technological advancements make it easier for investors to obtain information on stock trading in the stock market.

(Srivastava, 2011) The Internet has brought more clients access to financial product and services and reduced geographical obstacles. Previous investors depended only on their brokers, but are now more involved in buying and selling shares on the Internet. E-trading saves time, energy and money because it enables to access the market wherever possible.(Goswami, 2003)The Indian Internet brokerage sites are currently being rapidly extended with new services. It provides a significant advantage to small-time investors who would otherwise be ignored by traditional brokers. Using the Online Trading technique, a qualified investor may make their own decisions. It was shown that knowledgeable investors usually make their investment decisions after browsing through several broker websites and conducting their own research. Securities, debentures, bonds, mutual fund units, IPOs, and other investment vehicles are available to inverters.

In Indian financial market there different Modes of Trading in Indian Equity Market where investors able to in invest at ease in market. During the Covid-19 lockout, stock trading using mobile phones increased more than internet-based buying and selling of equities as retail involvement increased.Trading institutes is the main player of Indian capital market; it's time to increase the role of computers and electronics gadgets for smooth buying and selling of shares and securities. Technological advancements have resulted in high-frequency trading, which has had a huge influence on the market as a result of the increased number of investors. Additionally Brokers have been able to extend their customer base because to the simplicity with which e-KYC may be accomplished. The present article shows that online commerce is expanding and will continue to do so as more affordable cellphones become available for trading. The mutual fund SIP system is also discussed in this study, as well as its impact on individuals who are moving to smartphone trading as a result of technology improvements.

Literature Review

1. Technology and Stock Trading: (Aldyan et al., 2019)Though, from the perspective of a researcher, Technical innovation has a good influence on stock trading and makes the process easier, but it also has a negative influence, such as stock trading infractions as a result of technological innovation. The advancement of technology has an impact on the creation of laws that are related to stock trading are enforced for future**.** (Dewangan & Ikhar, 2018)The effects of technology on the stock market were explored, including increased market liquidity, market transparency, accuracy dealing, and perfect market competitiveness. According to the demand for new technology in the field of securities trading throughout time, SEBI should alter its rules and regulations to allow for the adoption of innovative technology and effective stock market governance.
2. Stock Trading Education and Technology: (Htay et al., 2010)Business transactions have been affected and facilitated by technological advancements. Due to the IT revolution, banks and stock brokerage firms are now delivering on-line financial services, giving investors access to a variety of financial planning information, such as real-time stock pricing, portfolio management, and so on. The adoption of Internet-based trading might signal a shift in society's attitude toward trade. It also demonstrates that factors such as age, educational level, and income had a significant role in distinguishing innovators from early adopters. (Liivamägi, 2016) Education and technology are mutually beneficial. As one of the most important factors influencing investor involvement and risk-taking decisions is education. Investor trading behavior on the stock market is also influenced by education; with knowledge, investors will be able to make educated stock market investing selections. Investors develop trading expertise and display superior investment performance with the aid of technology adaption during the trading process.(Girnara & University, 2020) Online trading is the act of using a brokerage's internet-based proprietary trading platform to place buy/sell orders for financial instruments and/or currencies. Online stock trading is quick, takes less time, has more options, and provides more information. By surfing through multiple sites, online trading allows knowledgeable investors to make their own decisions while keeping a careful eye on market sensitivity. Online trading will undoubtedly expand quicker as a result of the growing number of knowledgeable investors and the assistance provided by laws and regulations.(Shah et al., 2019) Financial markets provide a unique

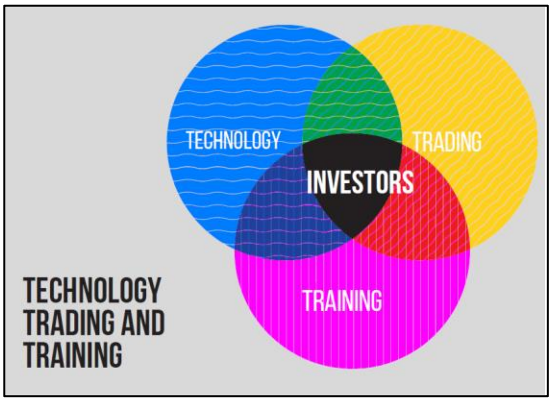
trading and investment environment, allowing trades to be conducted from any device with an Internet connection. People now have many routes to develop their investments thanks to the introduction of stock markets. Informal stock market education aids inventors in making better investing decisions. However, today's stock markets are designed utilizing a mixture of technology, such as machine learning and expert systems that communicate with one another to help people make better judgments. The use of machine learning methods and other algorithms to analyze and forecast stock prices is an area with a lot of potential**.** (Singh & Yadav, 2016)Investors just respond to the information they have access to and act appropriately. Before investing in the stock market, a lot of thought should be given to it. The behavior of investors has changed dramatically as a result of technological advancements, including their risk appetite and ease of investing. It is their position that financial education is critical in assessing risk-taking abilities**.**

3. Stock Brokers and Technology: (Prateek Singh in Voices, Business, Finance, 2021)Investing is a talent rather than a science. Between April 2020 and April 2021, new DEMAT account additions reached an all-time high of 10.7 million, according to statistics from the Securities and Exchange Board of India (SEBI). According to reports, the number of new DEMAT accounts established in FY20-21 increased by double. What's more interesting is that, in line with the global trend, not only have there been an increase in first-time users, but certain worldwide data trends have also showed that in the post-pandemic world, younger or millennial investors in India have been creating DEMAT accounts to begin trading. However, investment and trading need far more than a DEMAT account. (Rukhaiyar, 2019)With the advancement of technology, mobile trading has become increasingly popular. The rising adoption of smartphones, along with the availability of lower-cost data plans, has made the cellphone a popular platform for investors, particularly retail investors, to trade in the stock markets. Another aspect to consider is that most new-age cheap brokerages prefer that their clients trade using their mobile applications, which helps the brokerages save costs by reducing the number of dealers and relationship managers on staff. Brokerage trading applications are among the most popular in the finance sector on both Android and iOS.Traders gathered in the stock's trading area and started screaming to buy and sell the market when a stock moved on the strength of a news article. Today's high-tech & Fin-tech trading eliminates the need for screaming and provides investors with more efficient ways to analyze and buy stocks (ICRA, 2020)The stock market has reaped the benefits of the epidemic in an unexpected way. Working from home, along with restricted investment prospects due to the adverse economic climate and excellent prices following the March 2020 downturn, has sparked investor interest in capital markets. (ICICI Direct Research Desk, 2010) The Indian brokerage sector is transitioning from a percentage-based business model to a flat brokerage and subscription-based strategy. With increased financial savings and reduced interest rates, equities will continue to be an appealing asset class. (ETPrime, 2021)Because of digitalization and the influx of individuals from Tier-II and Tier-III cities, the broking sector is transforming. CDSL NSE 0.56 percent increased its customer base by roughly 35% this year, with digital players such

as mobile-based trading platforms accounting for 75% of the increase in new clients. Individual equities trading penetration in India is now between 4% and 5%, whereas China and Korea have approximately 12-13 percent. As a result, there is sufficient opportunity in India for the expansion of mobile trade through digitization and technological adaption. It was also noted that in the next 5 to 10 years, growth will be more favorable as a result of the increased engagement of the younger generation in the stock market. Because the younger generation is more objective and is more comfortable with technology, they employ numerous technological tools to examine equity market investments. Furthermore, it has been seen that Tier-II and Tier-III cities have experienced significant development. In terms of market strategy, Millennials and Gen Z are significantly more educated and savvy. They are better knowledgeable investors rather than risk takers. (Kshitij Bhargava, 2020)Winds of change may have started blowing in India's stock broking industry, with even traditional brokerage firms now cutting costs and offering retail investor's low-cost brokerage and research guidance as well. The traditional brokers have either tweaked their business or started a whole new venture for competitive offerings.

4. High Frequency - Digital stock trading: Trading is becoming more widely adopted because to technological advancements. Data science generates trading techniques that address investing difficulties, so investors no longer need to rely on professionals**.** (FINSMES, 2020)As a consequence of technology improvements, the way people do business has changed. Technological improvements have resulted in high-frequency trading. High-frequency trading is also known as day trading. Many people's lives have been significantly impacted as a result of this. This is owing to the simplicity with which low-risk stock trading investments may be made.
5. Triple T- Model (Technology – Training and Trading): In today's world, technology – training and trading – are boosting the stock market and increasing market transparency. These three components will play a critical role in the Indian stock market in the future years.

Figure 1: T- Model



Source: Secondary Data

Research Methodology

Aim and Purpose:

The aim of this study is to learn how easy-to-use technologies combined with low trading fees are enticing small investors to invest in the stock market.

Data Source:

A literature review was conducted in order to better explain the change from old-school trading to technology and application-based trading. Further, to understand the pattern of investors and their priorities for investing in the stock market during the pandemic era Data is gathered from secondary sources, such as BSE &NSE corporate documents and analyses, NSDL market records, and monthly Mutual fund Systematic Investment plan data.

Limitations of study:

Data collected for the present study is from secondary source. Any limitation in the accuracy of the secondary data carries forward to analysis made. Sample sizes is limiting factor as only past two years data has been considered. The results may vary in epitome circumstances.

Data (JEL) Classification: G1, G12, O1, O16, O33

As a result of technical improvements, large amounts of data have been collected, compiled, and archived, and are now publicly available for research. As a result, in order to better comprehend and assess the present situation, the current study takes use of an existing data base for research. Secondary analysis is employed in a number of ways in the current study; it is also an attempt to do empirical research using a systematic method and in an evaluative context.

To better understand the shift from old-school trading to technology and application-based trade, a literature analysis was done. moreover, to comprehend the pattern of investors and their goals for stock market investing during the pandemic era Secondary sources of information include NSE corporate papers and studies, NSDL market records, and monthly Mutual Fund Systematic Investment Plan data.

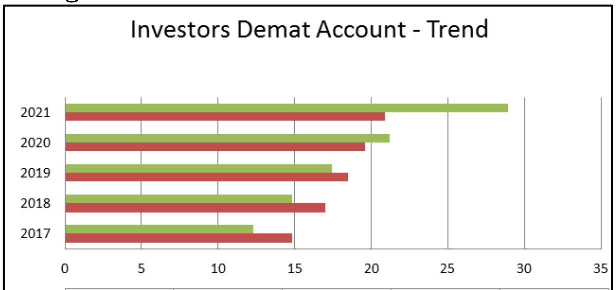
Data Analysis & Interpretation

Analysis of Evidence or Evidence Evaluation: The practice of increasing the number of clients is getting increasingly common. Client acquisition, a robust broking structure, and a shift to flat brokerage are all on the horizon.

Investors DEMAT Account:

An investor opens a DEMAT account with a depository participant in order to invest in assets such as stocks and bonds. The securities are stored digitally.

Figure 2: Investors DEMAT Account



	2017	2018	2019	2020	2021
CDSL	12.3	14.8	17.4	21.2	28.9
NSDL	14.8	17	18.5	19.6	20.9

Source: Secondary Data CDSL

According to the aforementioned statistics, investors are flocking to the stock market in the years 2020 and 2021, which are highlighted by Covid-19 Uncertainties. Many people are experiencing economic and financial difficulties during this time. According to the statistics, the number of DEMAT accounts opened in 2018 will double by 2021. According to statistics gathered from SEBI sources, the number of new Dematerialized or DEMAT Accounts has reached an all-time high. Total DEMAT accounts stood at 51.5 million, up from 40.8 million in 2020 and 35.9 million in 2019.

The number of retail investors with DEMAT accounts has risen significantly. This has been accomplished as a result of the smooth and simple to familiarize you with technology access to stock markets. The use of electronic know-your-customer and Aadhaar e-signing has aided the growth of the retail investor community and given them the confidence to enter the market.People are turning to the stock market for a variety of reasons, one of which is that they have more disposable income as well as more free time to learn and trade in the market. Another factor is that the majority of individuals worked from home, and non-essential expenditures were transformed into investments, allowing for short-term returns and an additional source of income.

Brokers Market Share:

The broking sector has seen significant changes and evolution over the last decade, owing to disruptions from bargain brokers, growing interest among diverse investment groups, buoyancy in equities markets, and digitalization.

Table No. 1: Brokerage Market Share

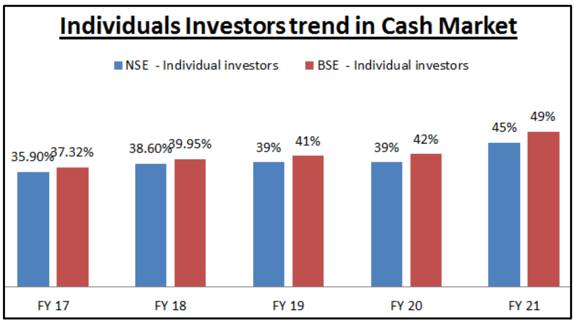
Broker	Market Share %
Zerodha	19.2%
RKSV Sec - (Upstox)	11.3%
Angel Broking	8.1%
HDFC Sec	5.6%
5Paisa Capital	5.0%
Kotak Sec	4.2%
Sharekhan	4.0%
Motilal	3.1%
Others	39.4%

Source:Secondary Data SEBI

Discount brokers like as Zerodha, Upstox, 5Paisa, and the recently launched Angel broking have reaped the benefits, particularly in terms of additional customer acquisition over the past year. In the same way as Zerodha's market share has risen over the last year, Upstox's market share has risen as well. Discount brokers have benefited greatly from the players spotting the trends in the stock broking market by gaining an early move and edge in this area. Digitalization, user-friendly applications and interfaces, and the service-oriented character of business are also said to have attracted more clients, particularly new and young investors. It has been noticed that the stock brokerage sector is experiencing a structural transformation from a percentage-based revenue model to a flat brokerage and subscription-based model as a result of technological adaption. The Indian broker business has also adopted a transaction fee model for services such as wealth management and investment advising, according to the report. While a move to a fee-based paradigm was already underway, with brokers concentrating on developing advisory models (wealth AUM), the epidemic has accelerated the speed of transition.

Retail or Individuals Investors trend in Cash Market – Spot Market:

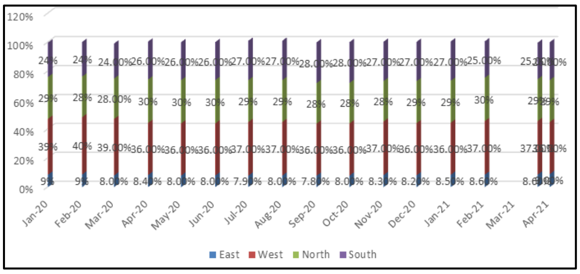
Figure 3: Individuals Investors Trend in Cash Market



Source: Secondary Data

During the previous six years, retail engagement in direct investment has gradually increased: The distribution capital market - cash segment has seen significant transformation over the previous six (fiscal) years. Individual investors' market share increased rapidly from 33% in FY16 to 45 percent in FY21, and has continued to rise substantially in the current fiscal year, offsetting the reduction in the proportion of FIIs, public and private corporations over the same period. This considerable increase in individual investor share in FY21 can be attributable to the increase in new investor registrations seen this fiscal year.

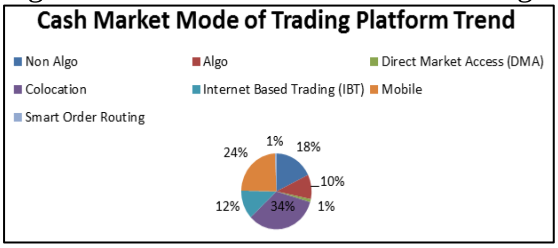
Figure 4:Region-Wide Distribution of Individual Investors Turnover in CashMarket



Source: Secondary Data

Individual investor turnover remained unbalanced among regions, similar to investor registration. Western and northern areas provided 37 percent and 29 percent of total individual investor turnover in March 2021, respectively, which is much more than the other two areas. Over the month, the southern area supplied roughly 29% of total individual investors, while the eastern area provided the remaining 8.6%. During the previous fiscal year, the distributional pattern remained quite consistent.Though there is no clear aggregate statistics on the number of consumers in each tier 1 and tier 2 area, market commentary from exchanges and brokerage firms indicate that investor interest in other parts of India is growing, particularly among young people in the 25-35 age bracket. In addition, the bulk of new clients have come from Tier 2 and Tier 3 cities.

Figure 5:Cash Market – Mode of Trading



Source: Secondary Data NSE

BSE Mode of Trading:

There are three main types of trading in the Indian stock market; there are eight distinct forms of trading.

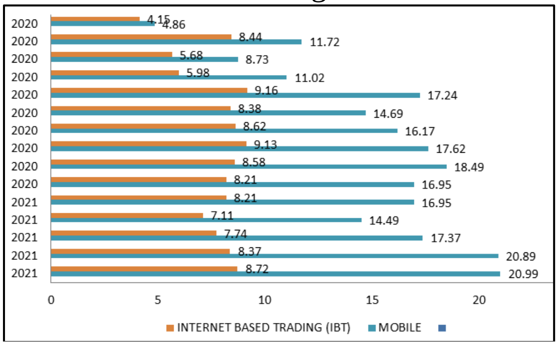
Table 2: BSE Mode of Trading Use by Different Investors

Mode of Trading	Used By
ALGO	Institutional Investors And Big Brokerage H
CO-LOCATION	Large Institutional Investors
FOW-NOW	Corporate Houses And Brokers
MOBILE	Retail Investors
INTERNET BASED TRADING (IBT)	Stock Broker And Sub Broker
NON ALGO (OTHER)	Institutional Investors And Big Brokerage H
SMART ORDER ROUTING (SOR)	Stock Broker And Sub Broker
DIRECT MARKET ACCESS (DMA)	Brokers And Financial Institutions.

Source: Secondary Data

Retail investors employ mobile and internet-based trading modes, which are among the eight primary modes utilized by institutional investors and broking houses or organizations. Online trading is used in both ways. During the Covid-19 lockout, stock trading using mobile phones increased more than internet-based buying and selling of equities as retail involvement increased.

Figure6: Comparative Trend of Mobile and Internet Base Trading in BSE Exchange

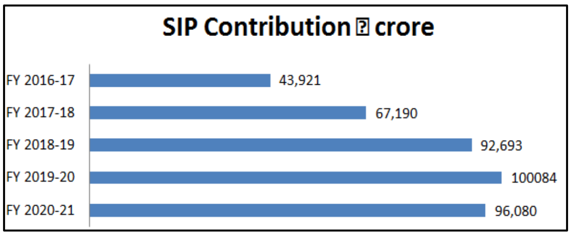


Source: Secondary DataBSE India

From March 2020 to April 2021, mobile trading turnover in the cash markets nearly doubled on the BSE Stock Exchange. Because of the shifting model of broking industry from fee based to service based, it has also been noted that mobile trading has risen month on month in contrast to internet-based trading. It is also clear that retail market involvement is increasing. This rising ratio indicates that more ordinary investors are willing to incur the risk of participating in the stock market. Furthermore, with the ability to work from home, people have more time on their hands to consider investing, and many appear to have begun doing so.

According to the statistics, mobile trading on the BSE market will overtake online trading in April 2020. Mobile trading has always had a large proportion of the market and will continue to do so. The economics and dynamics of trade have altered dramatically as a result of the covid 19 epidemic. Mobile penetration has been democratized thanks to low-cost smartphones and mobile data. Our mobile platform always had more users than our online platform in our situation.

Figure 6:Mutual Fund Trends – Switching To Stock Trading



Source:Secondary Data AMFI

In addition, contribution to SIP and inflows has decreased to 96080 crores in FY 2020-21 from FY 10084 crores in FY 2019-20. Because of the ease with which technology and its application may be used, it's likely that a child may wish to experience the excitement of trading on their own and redirect their finances to stock market trading. Investors have been attempting to diversify their portfolios with an equity mix over the past two years. Young people desire to take advantage of opportunities while also taking on the risk of bringing in equity, as seen by their usage of technology.

Findings

Investors opened a record 14.2mllllon new DEMAT accounts, a threefold increase over the previous year. The NSE Market Pulse report highlights the growing appetite for trading amongst individuals ;the share of individual investors 'in the cash segment grew to 45% in FY21 from 38.8% in FY20 and only 33% inFY16. In terms of the average daily turnover in the cash segment, trading by individuals grew whopping 97%, to Rs.27, 810 crores in FY21 from 14,123cror the previous year. On average, daily turnover through internet- based trading in the cash segment rose by 70%, to Rs.15400 cores in FY21 from Rs. 9,100 crores in FY20. Direct trading has hit mutual funds which have seen large outflows over the past year; inflows into SIP also declined to 96,080 crores in FY21 from 1, 00,084 cores in FY20.

Suggestions

The findings illustrate the socioeconomic implications on the ease of using technology to draw small investors to the capital market. Furthermore, the COVID-19 epidemic boosts stock market engagement by providing numerous technology-based trading courses for inspiring as well as investing in stock market investing strategies. Increased participation of small investors in the stock market during COVID-19 outbreak at the micro-level could allow financial institutions and individuals to manage such circumstances more effectively in the future. The current study has a small scope. Future research may be conducted by surveys of wider samples and in diverse environments to obtain further insights into technology and stock market investing.

Discussion and Conclusion

Individuals who seek more control over their own money in order to work toward future objectives have a lower entrance hurdle thanks to technological advancements. Individual investors may expect technology to continue to assist them in finding new or more efficient revenue streams. Investors may now use more complex and automated online money management methods thanks to technological advancements. With so much financial data at their fingertips, technology will help to standardize formats and make it simpler for investors to reuse data from one platform to another in order to provide the most accurate data possible(Grealish,2021).Because of technological advancements, the demographics and investment profile of individual investors have changed dramatically in the previous two to three years. According to the findings of this survey, retail investors have a bright future ahead of them and there is a lot of room for growth in the stock market. In India, the landscape of brokerage businesses has also evolved.The retail trading surge in

India has been fostered by pandemic-related restrictions and job losses, which have left millions of people stranded at home with nothing to do. Since March 2020, the stock market has been steadily rising, attracting more investors. And, with to advancements in technology, such as the growth of low-cost trading applications and social media—YouTube influencers, Twitter, and Telegram stock-tipping chat groups—hundreds of day traders have flocked to bargain brokers like Zerodha Broking. In terms of retail investor participation, China is unquestionably a model for what we may expect in India. Because India's economy is growing at a faster rate than China's, India's market capitalization is anticipated to overtake China's in the next 5 to 10 years.Surprisingly no literature and satirical information is available about the enrollment of BSE and NSE on certification module & their conversion to stock market. The pandemic like COVID-19 gives an immense opportunity to investors to invest in volatile market. From an Indian stock market perspective the age group of 30 to 35 years is very important as they falls under high risk takers and they are technologically very advanced. They are also the potential long term investors in near future. Altogether this can give a boost to Indian economy.

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A STUDY OF STRATEGIC DRIVERS AND OBSTACLES IN VENDOR MANAGEMENT INVENTORY IN ORGANIZATION

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ABSTRACT

The motivation behind this paper is to investigate the exhibition increment accomplished by vendor management inventory (VMI) under various degrees of outside supply limit, request vulnerability, and lead time. With IT innovation and the quick advancement of vehicle producing the executive's hypothesis, auto assembling buying and inventory management procedure have changed enormously. A Vendor Managed Inventory (VMI) has arisen. It has advanced the staggered and complex flow channel among the early customary stock, stockpiling, and assembling into a way that providers work by outsider coordination's to makers. It mirrors the inventory network joining the board considerations and acknowledges extremely brief time frame renewal and high precision. It has adjusted to the lean creation prerequisites of the producers. For the study purpose researcher selected the 170 samples and collected these responses by using the structured questionnaires method and used the chi-square test of independence for testing the statistically significant relationship between strategic drivers and implementation of VMI in organization.

Keywords: *Vendor Managed Inventory, original equipment manufacturers, inventory management.*

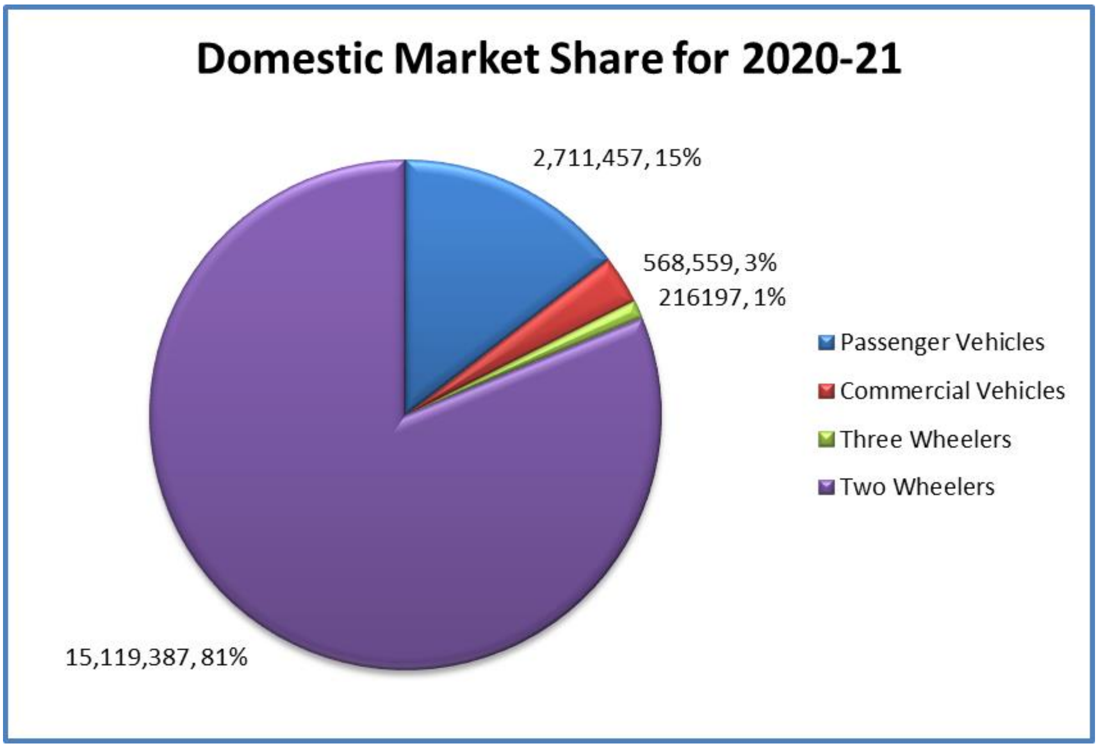
1. Introduction:

Productive and powerful inventory management is imperative part for any business to be fruitful. An indispensable piece of Supply Chain Performance is considered as Inventory the board of business. Latest things in Inventory Management like RFID, JIT and VMI assist the association with acquiring the benefits by decreasing the functioning capital, organization expenses, and builds effectiveness. A framework where the seller volunteer for the obligation of dealing with the retailer or client's stock with data progressively is called as Vendor Managed Inventory (VMI) . In this plan of action the seller assume full liability of good/item on premise of data of creation/sell given by purchaser. Seller oversaw stock was first polished in mid 1980s by Wal-Mart, Procter& Gamble later this was sent to a few area like retail organizations, hardware parts industry, materials and auto assembling.

Indian Automobile Industry is viewed as a significant mainstay of world's economy. Looking for the requirement for maintainable benefit over the furious contest, the car ventures are working in close connection with merchant. VMI changes the connection between client and Vendor. Rather than reacting to conveyance plan seller deals with the client's stock this proposition benefit to the two players. Car industry is having important requirements to carry out the VMI regarding Product, Process and Demand.

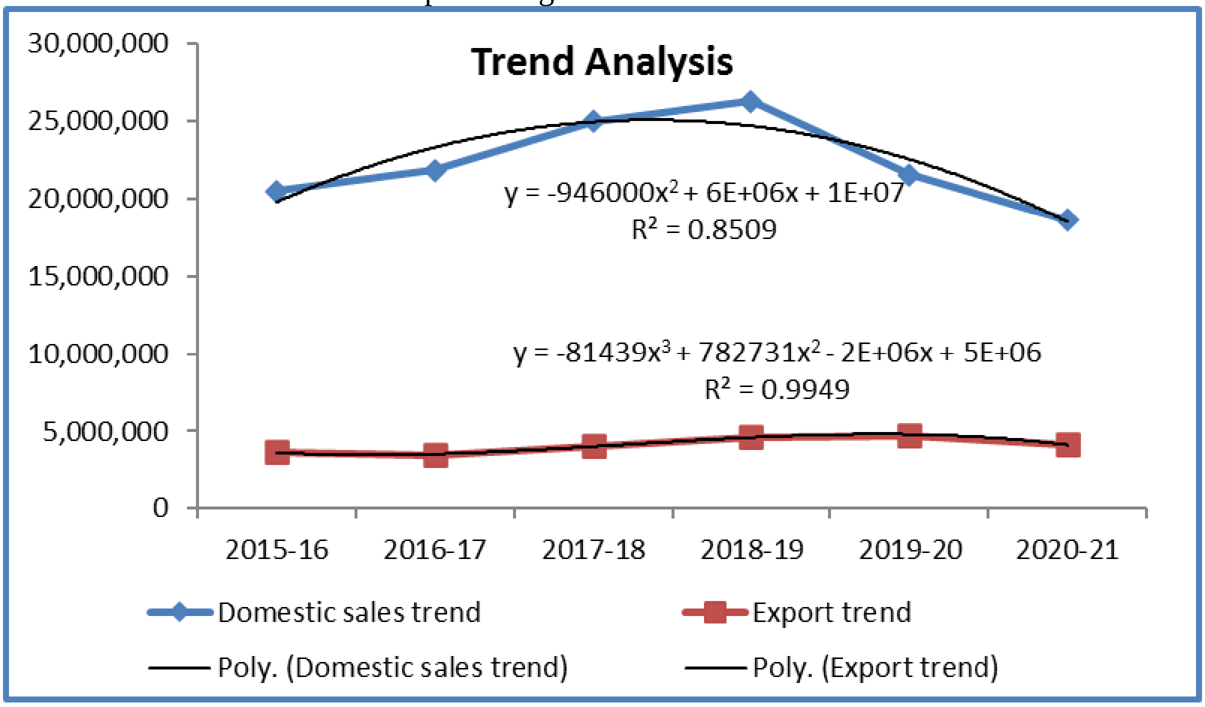
2.0. Significance of the study

Society of Indian Automobile Manufacturers (SIAM) is the apex Industry body representing leading vehicle and vehicular engine manufacturers in India. Researcher used the reports of SIAM and found that the commercial share of commercial vehicle sector in domestic market is only 3%.



Source: https://www.siam.in/statistics.aspx?mpgid=8&pgidtrail=14

In this above pie diagram researcher observed that the large market share is two wheelers i.e., 81 %. The passenger vehicle market share is 15%, three-wheeler market shares are 1% and finally the commercial vehicle share is only 3%. There is very huge market is open for commercial vehicle sector but sales are not the up to the mark. The dealers are compromising their own margins to retain market shares. There is needed to be focus on sales representative's consultative behaviour, increase the skill set of the sales representatives and improve the vendor management inventory to increase the share in domestic market.



Source: https://www.siam.in/statistics.aspx?mpgid=8&pgidtrail=15

In the above time series analysis there polynomial trend in both domestic and export sales trend. The R-square values of both trend lines are greater than the 0.7 that represents the both line best fitted polynomial trend line. Using this least square equation researcher can predict the future sales trend and try to minimizing the fluctuations in the trend can give the better results to improving the domestic and export sales trend for good sales results. There is good scope to increase the sales without scarifying the dealer's margin through delivering proper training to sales representative and maintain inventory management to increase the profit.

Scope of the study

The investigation is useful in the future as it portrays the transformation of merchant the board stock in the car business. The auto business is extremely serious and the organizations in this industry face vicious dispute at homegrown and global levels. In this manner, it is fundamental to bring merchant the executives stock into the strategic policies so unique creation exercises like stock control, improvement of client relations and others are performed adequately. The VMI helps the car business in Pune to carry out stock advancement and control frameworks with the assistance of an electronic stock structure so that keeping up with and situating of assets are executed viably. VMI additionally helps in overseeing provider claimed stock and lessens the tension on the business to perform exercises identified with distribution center stock administration. Thus, because of execution of VMI framework, the necessities of the clients are satisfied progressively effectively. Subsequently, it is exceptionally crucial for execute VMI into the working of vehicle industry with the goal that the business exercises, for example, inventory network, the executives, information investigation, modified revealing, and others will be performed viably. Moreover, the examination likewise gives data about the various parts like plan, control of seller oversaw stocks which are fundamental for the vehicle business to adjust to develop and grow its business exercises. It incorporates coordination's, building up between authoritative connections, innovation, inventory network joint effort, and others. The appropriate execution and administration of these variables help in car organizations in Pune to incorporate and deal with their funds. VMI teams up the monetary undertaking asset arranging framework with the ERP framework which assists the organizations with acquiring solid data and settles on business-related choices viably. Consequently, one might say that the current examination is profoundly valuable in the future in giving important realities identified with VMI.

2.1. Aims and Objectives

1. To study organisation objective that lead to adaptation of vendor managed inventory.
2. To study strategic drivers that force adaptation of vendor managed inventory.
3. To study obstacles that observed in working of vendor managed inventory.

2.1.2. Research Hypotheses:

The hypotheses were developed based on the research question and theoretical review.

1. There is statistically significant relationship between strategic drivers and implementation of Vendor Managed Inventory in organizations
2. There is statistically significant relationship between obstacles and adoption of Vendor Managed Inventory in organizations

3. Research Methodology:

Sources of Data: The data is collected from following sources.

• **Secondary Data Source**: The main source of secondary data is various sources like the Reports published and various database of Government Organizations/Departments, newspapers published, magazines, related books, Research Journals, Internet etc.

• **Primary Data Source**: Primary data is collected personally from automobile companies located in Pune region and their TIER I vendor/Supplier companies. Managerial level professionals working in the field of supply chain functions are the respondent and source for primary data.

3.1. Type of research: Descriptive research

Descriptive research is research type which is used in current problems and issues through data collection process. It enables the researcher describe the situation more completely over other methods. Researcher has employed descriptive research with survey and observations methods. The process of phenomenon was studied for sample and then it was extrapolated to the population. The structured interview technique was opted by researcher because of its being more economical, providing a safe basis for generalization and requiring relatively lesser skill on the part of the interviewer.

3. Sampling Design: Sampling design is done in research in order to draw a representative sample from the population and reach reliable conclusions.

Population/Universe: The population/ universe is considered as: „Original equipment manufacturer and their TIER I vendors‟. Total 10 OEM are based in Pune region and each OEM has 3 vendors on an average who work in collaboration with OEM for inventory management. The companies under study taken by researcher are 40 companies.

Sampling Unit: The sampling unit in this research is taken as „All the OEM and the TIER I vendors located in Pune region‟.

Sampling Frame: The sampling frame in this research consists of list of all the sampling units in the population. The sampling frame is collected from internet.

Sample Size: Sample size was determined using techniques "Sample size determination by mean method". Variables in study were measured using a 5-point measurement scale & then the mean method was adopted.

Formula: N = $(z^2*s^2)/e^2$

Where, „z‟ is the standard score associated with confidence level (90% in the current case). Hence standard scores equals to 1.645 (borrowed from normal table) "S" is the variability in the data set, computed as a ratio of range / 6. Range is equal to 5- 1 = 4 (the difference between minimum and maximum value in the 5 point scale). 6 refer to ±3 standard deviation values on the X axis of the standard normal curve, which takes in all the data set in study.

Hence S = 4/6 = 0.66

E is the tolerable error = 9% (in the current study).

Sample size n = (〖1.645〗^2∗〖0.66〗^2)/〖0.09〗^2 = 145

The 20% of the sample size is taken as buffer to deal with non- responses. 145 x 0.20 = 29

145 + 29 = 174, however, 4 questionnaires were discarded for incompleteness; hence the final sample size is freeze at 170.

4. Data Analysis:

Hypothesis 1

Ho: There is not statistically significant relationship between strategic drivers and implementation of Vendor Managed Inventory in organizations

Against

H1: There is statistically significant relationship between strategic drivers and implementation of Vendor Managed Inventory in organizations

Table 1 Observed frequency table

Sr. No	Parameter	SA	A	N	D	SD	Total
1	Competition	50	59	52	9	0	170
2	Shorter product life cycle	0	83	28	9	50	170
3	Global supply chain	40	86	34	0	10	170
4	Corporate structuring	0	101	69	0	0	170
5	Scale of Operations of OEM	38	123	9	0	0	170
6	Scale of Operations of Vendor	0	83	62	0	25	170
7	Sole Sourcing	9	68	24	69	0	170
8	Improved Forecasting Ability	19	109	42	0	0	170
9	More Accurate Ordering and Fulfillment	77	49	9	25	10	170
10	Reduces the risk of errors in ordering	68	74	19	9	0	170
	Total	301	835	348	121	95	1700

Table 2 Expected frequency table

Sr. No	Parameter	SA	A	N	D	SD	Total
1	Competition	30	84	35	12	10	170
2	Shorter product life cycle	30	84	35	12	10	170
3	Global supply chain	30	84	35	12	10	170
4	Corporate structuring	30	84	35	12	10	170
5	Scale of Operations of OEM	30	84	35	12	10	170
6	Scale of Operations of Vendor	30	84	35	12	10	170
7	Sole Sourcing	30	84	35	12	10	170
8	Improved Forecasting Ability	30	84	35	12	10	170
9	More Accurate Ordering and Fulfillment	30	84	35	12	10	170
10	Reduces the risk of errors in ordering	30	84	35	12	10	170
	Total	301	835	348	121	95	1700

"The above Expected Frequency Table, researcher calculate the expected frequencies in Microsoft Excel by using the formula Expected Frequency for each cell = (Corresponding Row Total X Corresponding Column Total) / Grand Total of responses conducted through questionnaire".

Eij = (Ri X Cj) / N, i = 1,2,3…….n, j = 1,2,3,……m

Where Eij = Expected Frequency of ith Row and jth Column.

Ri = Row Total of ith cell.

Cj = Column Total of jth cell.

N = Grand Total

Table 3 P-Value table of Chi-square test of Independence

Sr. No	Parameter	P-Value
1	Competition	0.0000000652
2	Shorter product life cycle	0.0000000000
3	Global supply chain	0.0038097672
4	Corporate structuring	0.0000000000
5	Scale of Operations of OEM	0.0000000000
6	Scale of Operations of Vendor	0.0000000000
7	Sole Sourcing	0.0000000000
8	Improved Forecasting Ability	0.0000004711
9	More Accurate Ordering and Fulfillment	0.0000000000
10	Reduces the risk of errors in ordering	0.0000000000

"In the above P-Value table, researcher used Chi-Square Test of R X C contingency table. Using Micro-Soft Excel researcher calculate the P-Values by using Observed Frequency Table and Expected Frequency Table. For calculation purpose, researcher used the following formula,

1st P-Value = ChiTest(Observed Frequency Table O1j, Expected Frequency Table E1j)"

j = 1,2,3,…..m

Similarly,

2nd P-Value = ChiTest(Observed Frequency Table O2j, Expected Frequency Table E2j)

j = 1,2,3,…..m etc.

Decision Criteria

"The chi-square test is for testing the null hypothesis, which states that there is no significant relationship between the expected and observed result. If P-value is less than or equal to the level of significance i.e. alpha is less than or equal to 0.05 then researcher may reject the null hypothesis i.e. H0. Otherwise, researcher may accept the alternative hypothesis H1".

Interpretation:

In the above table of P-Values, researcher noticed that all the P-Values are less than the smallest level of significance i.e. 0.05 so

researcher may reject the null hypothesis H0 and accept the alternative hypothesis H1.
It means that, there is statistically significant relationship between strategic drivers and implementation of Vendor Managed Inventory in organizations

Hypothesis 2

Ho: There is not statistically significant relationship between obstacles and adoption of Vendor Managed Inventory in organizations

Against

H1: There is statistically significant relationship between obstacles and adoption of Vendor Managed Inventory in organizations

Table 4 Observed frequency table

#	Parameter	SA	A	N	D	SD	Total
1	Ineffective organizational structure	50	59	52	9	0	170
2	Lack of suitable IT infrastructure	0	83	28	9	50	170
3	Improper decision support tool	40	86	34	0	10	170
4	Lack of trust and mutual understanding between supply chain partners	0	101	69	0	0	170
5	Internal/external integration	38	123	9	0	0	170
6	OEM demanding position	0	83	62	0	25	170
7	Infrastructure in India	9	68	24	69	0	170
8	Initial investment from both partners	19	109	42	0	0	170
9	Impact due to random trade promotions	77	49	9	25	10	170
10	Lack of clarity of scope, KPI, role and responsibility of both the parties	68	74	19	9	0	170
11	Technology capacity	0	38	78	54	0	170
12	Contractual relationship	19	124	18	9	0	170
13	Handling stock level- over and or obsolescence	59	92	9	10	0	170
14	User acceptance	18	43	60	39	10	170
15	Implementation of VMI strategy requires technological investment	38	28	74	30	0	170
16	IT upgrading requirements and frequency	9	83	9	59	10	170
	Total	444	1243	596	322	115	2720

Table 5 Expected frequency table

Sr. No	Parameter	SA	A	N	D	SD	Total
1	Ineffective organizational structure	28	78	37	20	7	170
2	Lack of suitable IT infrastructure	28	78	37	20	7	170
3	Improper decision support tool	28	78	37	20	7	170
4	Lack of trust and mutual understanding between supply chain partners	28	78	37	20	7	170
5	Internal/external integration	28	78	37	20	7	170
6	OEM demanding position	28	78	37	20	7	170
7	Infrastructure in India	28	78	37	20	7	170
8	Initial investment from both partners	28	78	37	20	7	170
9	Impact due to random trade promotions	28	78	37	20	7	170
10	Lack of clarity of scope, KPI, role and responsibility of both the parties	28	78	37	20	7	170

Sr. No	Parameter	SA	A	N	D	SD	Total
11	Technology capacity	28	78	37	20	7	170
12	Contractual relationship	28	78	37	20	7	170
13	Handling stock level- over and or obsolescence	28	78	37	20	7	170
14	User acceptance	28	78	37	20	7	170
15	Implementation of VMI strategy requires technological investment	28	78	37	20	7	170
16	IT upgrading requirements and frequency	28	78	37	20	7	170
	Total	444	1243	596	322	115	2720

"The above Expected Frequency Table, researcher calculate the expected frequencies in Microsoft Excel by using the formula Expected Frequency for each cell = (Corresponding Row Total X Corresponding Column Total) / Grand Total of responses conducted through questionnaire".

Eij = (Ri X Cj) / N, i = 1,2,3…….n, j = 1,2,3,……m

Where Eij = Expected Frequency of ith Row and jth Column.

Ri = Row Total of ith cell.

Cj = Column Total of jth cell.

N = Grand Total

Table 6 P-Value table of Chi-square test of Independence

Sr. No	Parameter	P-Value
1	Ineffective organizational structure	0.0000000210
2	Lack of suitable IT infrastructure	0.0000000000
3	Improper decision support tool	0.0000136534
4	Lack of trust and mutual understanding between supply chain partners	0.0000000000
5	Internal/external integration	0.0000000000
6	OEM demanding position	0.0000000000
7	Infrastructure in India	0.0000000000
8	Initial investment from both partners	0.0000000090
9	Impact due to random trade promotions	0.0000000000
10	Lack of clarity of scope, KPI, role and responsibility of both the parties	0.0000000000
11	Technology capacity	0.0000000000
12	Contractual relationship	0.0000000001
13	Handling stock level- over and or obsolescence	0.0000000000
14	User acceptance	0.0000000002
15	Implementation of VMI strategy requires technological investment	0.0000000000
16	IT upgrading requirements and frequency	0.0000000000

"In the above P-Value table, researcher used Chi-Square Test of R X C contingency table. Using Micro-Soft Excel researcher calculate the P-Values by using Observed Frequency Table and Expected Frequency Table. For calculation purpose, researcher used the following formula,

1st P-Value = ChiTest(Observed Frequency Table O1j, Expected Frequency Table E1j)"

j = 1,2,3,…..m

Similarly,
2nd P-Value = ChiTest(Observed Frequency Table O2j, Expected Frequency Table E2j)
j = 1,2,3,…..m etc.

Decision Criteria

"The chi-square test is for testing the null hypothesis, which states that there is no significant relationship between the expected and observed result. If P-value is less than or equal to the level of significance i.e. alpha is less than or equal to 0.05 then researcher may reject the null hypothesis i.e. H0. Otherwise, researcher may accept the alternative hypothesis H1".

Interpretation:

In the above table of P-Values, researcher noticed that all the P-Values are less than the smallest level of significance i.e. 0.05 so researcher may reject the null hypothesis H0 and accept the alternative hypothesis H1.
It means that, there is statistically significant relationship between obstacles and adoption of Vendor Managed Inventory in organizations

5. Conclusion:

In this research, researcher concludes that, there is statistically significant relationship between strategic drivers and implementation of Vendor Managed Inventory in organizations. The organization need to focus strategic drivers like Competition, Shorter product life cycle, Global supply chain, Corporate structuring, Scale of Operations of OEM, Scale of Operations of Vendor, Sole Sourcing, Improved Forecasting Ability, More Accurate Ordering and Fulfillment, Reduces the risk of errors in ordering for effective implementation of Vendor Managed Inventory in organizations. Also researcher concludes that, there is statistically significant relationship between obstacles and adoption of Vendor Managed Inventory in organizations. The organization need to manage the following obstacles like Ineffective organizational structure, Lack of suitable IT infrastructure, Improper decision support tool, Lack of trust and mutual understanding between supply chain partners, Internal/external integration, OEM demanding position, Infrastructure in India, Initial investment from both partners, Impact due to random trade promotions, Lack of clarity of scope, KPI, role and responsibility of both the parties, Technology capacity, Contractual relationship, Handling stock level- over and or obsolescence, User acceptance, Implementation of VMI strategy requires technological investment and IT upgrading requirements and frequency while adoption of the Vendor Managed Inventory in organizations

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