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Editorial.....

Dear Researchers,

Greetings!

In today's VUCA world, organizations are struggling to survive and remain relevant not only for their customers but also society. With information available at the swipe of a screen, customers are more informed than ever. Employees are also seeking meaning in their roles and want their contribution to count. The market dynamics are changing and organizations have to be agile to thrive in this environment. The capability to deliver high-value features and products fast and responsively while continuously minimizing waiting, waste, and defects are delivering agility.

Keeping this in mind, Chetana's Institutes of Management hosted an International Conference on Business Agility to provide a platform to academicians, industry professionals and students to deliberate and initiate a dialogue on the topic.

The current edition of Chetana's Journal of Management includes select papers presented in the Conference. Some of the issues addressed are the role of blockchain and Artificial Intelligence (AI) in helping organizations deal with the supply chain issues, the pros and cons of AI and its applications in management education and in offline grocery retail. A paper on Strategy explores the importance of understanding of cross cultural behaviour for success in business across various geographies, and a finance themed paper dwells on aftermath the financial crisis of 2008. A marketing research paper has studied the various strategies adopted by the consumer centric companies in the health drink sector in India. A conceptual paper on how the travel and tourism sector looks beyond traditional consumer cohorts makes for some interesting reading.

A book review of the ' Portfolio Book of Great Indian Business Stories', presents a snapshot on the riveting and inspiring stories of Indian Business Leaders.

I hope that the research articles would prompt more ideas and help in building on the extant work. If there is any feedback that you wish to share, please write to me at nalini.krishnan@cimr.in.

Dr. Nalini Krishnan

March 31st, 2019

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A Study on Cross Cultural Behaviour in South Asia & Strategies for Business

*** Mr. Rajiv Gatne**

Abstract:

An understanding of cultural differences helps international managers in conceptualising and implementing business strategies in view of culture sensitivities among various nations.

South Asia is a very unique region. It has diverse cultures & rich heritage. There are different languages, religions, customs & practices. The Culture has great influence on business practices. It is observed that many businesspersons coming from western countries like Europe & USA fail to understand nuances of South Asian culture & make blunders. Very often, it results in failures.

In this study, we have made an attempt to do a cross – country analysis of South Asian countries with respect to their cultural behaviour. This will help us develop good understanding of various cultures & how to deal with them. The countries in study are: India, Pakistan, Bangladesh, Sri Lanka, Nepal, Bhutan, Maldives & Afghanistan.

1. INTRODUCTION

Due to liberalisation and subsequent globalisation, the world has become a ‘Global Village’. Furthermore, technology and communication have made the world a truly ‘borderless world’. There are virtually no barriers, as regards transfer of information, knowledge, technology and human resources. A large number of people are travelling across the world for leisure, business and work or are migrating. Similarly, people are getting exposed to international changes, through the worldwide

web, media and entertainment. In this process, there is an exchange of ‘culture’ too.

Consequently, one is exposed to diverse cultures. One needs to face this situation properly, without committing any *faux pas*. If one handles the cross-cultural situations, one encounters, effectively, then s/he would succeed in his/her endeavour. On the other hand, if one fails to manage cultural diversity, it can have serious consequences – such as damaging relationships, breaking businesses, developing animosities and at times resulting in seri-

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ous legal consequences.

Hence, one needs to understand various pitfalls in cross-cultural management and how to avoid them, by developing competence, so as to become successful in all endeavours involving cross-cultural situations.

2. OBJECTIVES OF THE STUDY

The main objective of the study is to find out cultural differences & unique features of South Asian Society & how to operationalize this learning while doing business in South Asia.

The objectives are –

1. To study & understand specific cultural practices across the South Asian Countries.
2. To understand the cultural differences within the South Asian Countries.
3. To formalize guidelines for formulating successful business strategies/approaches while doing business in South Asia.

3. RESEARCH DESIGN

At first secondary research was done by studying number of reference books & various articles on the topic of ‘Cross Cultural Behavior & global environment.

Cross-cultural Behavioral analysis of South Asian Countries was done using following Frameworks:

- a) ‘Hotstede’s Cultural Classification
- b) Trompenaars’ Cultural classification
- c) Other Cross – Cultural Classifications

This Author has on field experience of operating in all the countries in South Asia. Author has over 25 years of experience in conducting business & deal-

ing with number of business people in these countries.

Utilizing the experience of working in these countries & using above frameworks analysis was done & suitable business strategies/approaches were recommended.

2. Cross – Cultural Behaviour Analysis of South Asia:

3.1 ‘Hotstede’s Cultural Classification

This is a widely used tool to understand cross-cultural behaviours & their differences. This classification was based on big survey of 116,000 participants. (Joshi R.M, 2014)

3.1.1. Power Distance: The extent of inequality that is prevalent among people when viewed as equitable is called as ‘power distance’. (Parhizgar kamal, 2007). In other words extent to which the less privileged or powerful people in an institution feel that there is an unequal distribution of power.

In South Asia, most of the countries have hierarchical societies. It has feudal society history. Hence, the distance between the top & bottom persons in an organisation is very long. It creates inequality of power distribution in a society or an organisation. Taking into account power distance, manager handling international business must evaluate the organisational dynamics, fond out important decision makers, and then formulate marketing strategies in different countries.

3.1.2 Individualism v/s Collectivism

The tendency of persons to take care of their own interest and that of their near & dear one is called individualism. On the other hand, Collectivism is the tendency of persons to be a part of certain groups & also to take care of everyone in return for their

loyalty. (Hill Charles w, Jain Arun k, 2014).

Here group interest is paramount & above that of an individual.

In South Asia, there is a tendency for people to belong to & identify with a group or a community. It is considered rude to stand out as an individual & act selfishly. In countries like India, young couple continues to live with their parents to take care of them in old age. Separating from them is abhorred. Individual goals are subservient to community or group goals. No one can stand out. However, there are recent trends in India & some neighbouring countries that with western influence there are Nuclear families.

3.1.3 Masculinity v/s Femininity

The Masculine societies are those where certain dominant values related to work goals, like earnings, advancements, success, and possession of material benefits. While in feminine society it is the achievement of individual goals like caring of others, getting along well others and boss, quality of life, and friendly atmosphere. (Dowling peter j, Festing marion, Engle allen, 2012)

In South Asia, people ‘work to live’. For them family is more important than work or other materialistic benefits. People want friendly work environment, get along well with boss & others in an organisation. Very often work place becomes an extension of family.

3.1.4 Uncertainty Avoidance

It is an absence of tolerance for any ambiguity & needs formal rules in place. It counts the limit to which some people become threatened in ambiguous circumstances. In countries showing high extent of uncertainty avoidance, employment for lifetime is quite common. But in countries showing

low extent of uncertainty avoidance societies job mobility is very common.

In South Asia, there is a lack of tolerance for ambiguity. People want stability & continuity. Hence, most organisations provide lifetime employment. There are no hire & fire policies. Even if someone is asked to leave organisation for certain reasons, proper care is taken for rehabilitation. There are proper rules in place. It is also not easy to sack employees especially in lower level.

3.2 Trompenaars' cultural classification

Here research was conducted over 10 years period by surveying sample size of 15,000 managers residing in 28 countries & report was published during 1994.(Menipaz Ehud, Menipaz Amit, Tripathi s s, 2011). This research addresses five cultural dimensions in which people deal with each other.

3.2.1 Universalism vs Particularism

Universalism is a kind of belief, which states that without any modifications, various practices and ideas could be defined as well as applied everywhere. On the other hand, particularism is of the belief that some specific relationships & situations, rather than any abstract rules, that is considered more important and decides how practice & ideas could be applied.

In South Asia, the societies follow particularism, wherein relationships are more important than rules. The contracts are not sacrosanct. These can be modified according to situations.

3.2.2 Individualism v/s Communitarianism

This is similar to Hofstede's concept of Collectivism'. Where people consider themselves mainly as individuals; it is called ‘Individualism’, while in Communitarianism where people refer among themselves as belonging to or part of a group.

In South Asia people more frequently use more frequently ‘We’ than ‘I’, business decisions are taken jointly.

3.2.3 Neutral v/s Affective

Affective cultures are those cultures where it is common to express emotions openly as well as it is most ‘natural’. While neutral cultures do not permit people to express emotions but rather hold them back. The emotions & feelings are not exhibited freely. In neutral cultures expressing intensity, delight or anger in workplace is considered as ‘unprofessional’. While in affective cultures holding back of emotions is considered as a ‘mask of deceit’ or ‘emotionally dead’.

In South Asia, there is Affective culture. People express themselves freely & emotionally. There will be loud laughter, anger & talk. There is warmth & lot of enthusiasm while greeting people.

3.2.4 Specific v/s diffuse

The extent of involvement in peoples i.e. how people are comfortable while dealing with one another varies from culture to culture. The comparative size of people’s private & public ‘spaces’ as well as the extent to which various individuals feel themselves comfortable by sharing them among others varies across cultures.

In South Asia is a diffuse culture, private & public space is almost similar. Usually public space gets guarded quite securely as an entry in public space also allows access to their private space.

Private & work life are closely linked in South Asia. Doing business is highly time consuming. Hence, it is vital to invest resources & time as well as build relationships while in South Asian countries.

3.2.5 Achievement v/s Ascription

Cultures vary & determined according to the role of power as well as status in a society. The power and status position arises either as a person’s birth-right or from person’s efforts as well as achievements.

People in achievement cultures, are usually assessed & given status according to their performance on allocated functions.

In South Asia, it is an ascription culture. The status is given to those individuals who do evoke admiration quire ‘naturally’ from other people like highly skilled & qualified people, seniors & elderly in the organisation. Usually status is not related to specific functions or a task. Society endeavours to give respect to those distinguished personalities that are not readily comparable to others.

Managers from achievement cultures like Europe & USA doing business in South Asia need to show proper respect for formal position holders, seniors & elders.

3.3 Other Cross – Cultural Classifications

3.3.1 High context v/s Low context

The context of a culture has crucial implications in communicating & interpreting verbal & non-verbal messages. Different cultures interpret verbal & non-verbal cues differently.

In high context cultures, implicit communications such as non-verbal & subtle situational cues are important. On the other hand, in low context cultures, communication is more explicit and relies on words to convey the meaning.

In South Asia it is a high context culture, the rela-

tionship is long lasting. Verbal commitments are given in South Asia may not always be written. The market promotion & advertising is usually subtle & need not focus on explicit display of information & facts. Marketing companies usually build relationship with customers & hence sales team is kept for longer duration.

332 Homophilous v/s Heterophilous

On the basis of homogeneity, culture is divided into two groups –

- a) Homophilous : Where people in a culture share same language, religion & belief.
- b) Heterophilous: In these cultures, one finds large amount of variation or differentiation in terms of language or beliefs or religion.

In South Asia, many of the countries are Homophilous. E.g., Srilanka, Bangladesh, Nepal, Bhutan & Maldives have same language, beliefs & Religion. However, India is very diverse & is therefore Heterophilous. It has 22 official languages, 15 religions & many belief systems. Similarly, Afghanistan & Pakistan too are Heterophilous. Though both have common religion as Islam but there are many languages, ethnicity & different beliefs. In this region new products takes much less time & uniform marketing mix decisions can be adopted.

333 Relationship focused v/s deal focused

Relationship focussed cultures give importance to human relationship, while cultures that are deal focused are usually task oriented. (Coteora Philip, Gilly mary c, Graham john l, 2014). Whenever, business managers coming from cultures that are deal focused cultures & enter into business with relationship-focussed cultures, then conflicts arise. This is because people from cultures of relationship focused find that people coming from cultures that are deal focused are blunt, offensive & aggress-

sive. While people from cultures of deal focused, find that people from cultures of relationship focused are enigmatic, slack & vague.

South Asia is a relationship-oriented society. Here people have greater tendency towards building relationships as well as developing a mutual trust. People rarely approach strangers for marketing. They make use of intermediaries, use of trade shows & exhibitions to meet prospects.

There is greater emphasis about maintaining as well as building relationships & develop rapport. Communication is always high context, polite & indirect. Usually meetings & negotiations take place face to face. Emphasis is on ‘saving face’ & maintaining dignity as well as respect. During negotiations, lawyers are always in background. Verbal deals are more important than contracts in writing.

Thus, it is essential that one build personal rapport in cultures that are relationship focused. Business is conducted through intricate networks of personal contacts & one deals with friends & family members with great trust.

334 Formal vs Informal

South Asian people are more formal in their relationships. There are formalities to be followed during meetings or conversations. The societies are very status conscious. It is a hierarchical society. People are always addressed with their title or family name.

In various functions & meeting, there are protocols as well as rituals to be followed. E.g. In India functions starts with lighting of lamp & at times prayer to god. The speakers are introduced first in the order of seniority. Seating arrangements to reflect seniority & status.

335 Polychronic v/s Monochronic

Based on adherence of time schedule, cultures are divided into two groups.

South Asians have Polychronic or fluid time cultures. Here people usually follow a relaxed approach in framing time schedules, meeting deadlines & punctuality that sometimes makes business managers belonging to rigid time cultures like USA & Europe frustrated.

Here people & relationship are more important than punctuality & schedules. Schedules & deadlines are flexible. Meetings are frequently interrupted.

Value of time is understood quite differently in South Asia. People usually do not comply with timelines. There is a concept of 'Flexible time' wherein arriving on time is not sacrosanct. Late arrivals for meetings & functions are accepted. Schedules & deadlines are always negotiable and flexible. Allowances for time schedules are always provided. What is most important is relationship with people rather than time schedules etc.

During the meetings, there will be several interruptions either by way of phone calls or staff members dropping in for some work. Meetings would last for much longer time than expected.

Hence, business managers travelling from polychronic cultures like South Asia, while attending business meetings in USA need to be careful & ensure reaching on time. Similarly, business managers travelling from monochronic cultures like USA & Europe need to have patience while dealing with people from South Asia.

336 Expressive v/s Reserved Cultures

In expressive cultures, patterns of communication

are quite different from its reserved counterparts. It is valid for verbal as well as non – verbal communications.

In South Asia, people speak loudly & they are often uncomfortable when there is a silence during meeting or conversations. Usually there is shorter arm's length when people stand near each other. People Europe & US find uncomfortable such a short distance & they usually pull back. It is very common to have lot of body contact among the people. They hug & pat each other. Also, there are plenty of touch of body during meetings. People from western countries are not comfortable with these situations.

People from South Asia show lot of facial expressions during conversations & many a times it is accompanied by body gestures we well.

4. SUGGESTIONS

While dealing with people in South Asia following precautions should be taken:

- i) Manager handling international business need to assess organisational dynamics, find out key decision makers in the organisation and then strategise business approaches.
- ii) Community is important & decisions are taken collectively. So, one needs to approach discussions accordingly.
- iii) It is important to establish personal rapport & relationships.
- iv) Formalities & rituals are to be followed during meetings.
- v) People are family centric & want friendly work environment.
- vi) People are very emotional & will express emotions openly. Be ready for it & accept it.
- vii) As people have flexible concept of time & dead-

- lines, one needs to have patience while dealing with people from South Asia.
- viii) Within the countries like India, Pakistan & Afghanistan there is diversity in culture with respect to language, customs & practices. Hence single approach will not do.

5. CONCLUSIONS

From the foregoing, it is observed that South Asian countries are quite different in culture as compared to other regions. For an International Manager to succeed in South Asia region, he must understand cultural difference & adapt his strategies as well as approaches so as to meet local requirements. This understanding prevents any mishaps during meeting & discussions with their counterparts. If these suggestions are followed then one could surely guarantee success for a business deal in South Asia.

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Adapt or Perish: The Rise of Health Drink Sector

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** Dr. Anuja Joshi

Abstract

Coca-Cola has one of the largest distribution channels in Indian market. The beverage giant is not only the leading beverage brand over the globe but also the trend setter in the product segment. The company is known for running operations successfully globally with the help of thousands of local channels. It has a large potential of not only launching but also testing new products. In the contemporary market scenario, growth has been seen in number of people realizing the importance of caring about health and wellness. Wellness products globally making huge profits and new markets are emerging every day. The study observes the changes in preferences and thus the change in trend of beverages industry. Other objectives include finding out the awareness and availability of packaged health drinks. The project also studies extent of consumers' desire for healthy beverage products from established brands like Coca-Cola. Study will make observations on new market of health drinks and feasibility of the company with respect to people's perspective about this emerging market.

Keywords: Business agility, Beverages market, Consumer preferences, Coca-Cola, Health drinks

INTRODUCTION

Every firm or a business organization should possess a well-defined and sharp set of qualities and processes which shall let the business to respond quickly to an internal and external environment changes and amend itself in order to maintain its original momentum and vision-Mission this can

roughly be stated as the definition of business agility. For long-term business agility flexibility, adaptability and balance are three crucial qualities which are essential for any business. This is the age in which customers are becoming more demanding and insisting an engagement with a company. Strategies of a marketer should focus on thinking of a company as living organism which is always open

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for adaptations of the contemporary wants to show agility. Experts have already advised that it is essential for every organization to be treated as a Complex Adaptive System. Many companies take time to change their set of attitude and do not work towards it until they are pushed to the wall and their survival is threatened. Every business organization must identify its capabilities, and have the ability to be aware, adapt and respond to survive and remain healthy. Marketers must align themselves to the larger purpose of the organization and hence the customers.

Agile practices in Fast moving consumer goods companies are increasingly on the rise which is helping them to generate more revenue. With this fast evolution, FMCG sector needs to have knowledge of new business verticals. A report by Accenture found that high-performing companies are six times more likely to use agile practices than companies that don't perform as well. With 4th largest sector having food and beverages as a significant sector, companies who are catering the customers should be more vigilant to current trends. Paying heed to need, wants and demands of generation Z is often the key to maintaining long-term business agility. Still, big beverage companies seem to rely on 'proven' methods of doing things and are finding themselves falling behind the competition because of unwillingness to adapt quickly to shifts in the environment.

To illustrate agility, Mumbai city's popular traditional cabs can be taken into account. Known for their signature yellow and black color (*Kali-Pili*), the whole cab business is now in the never before calamity. The whole trade setup is very much rigid and the city like any other metro cities in the country has seen a sudden change in preferences of commuters and passengers. The wave was started

long back and it was alarming too when radio taxis were introduced like MERU cab, anyone can call and schedule his/her ride to any location- a way more convenient approach than the traditional cabs. Fortunately, the government intervened and protected the market by regulating the radio cabs. Then came the cab aggregators and app based services and now big giants like Uber, Ola are in a place where a significant part of economy drivers is dependent on their service.

In another example, rather a famous one, RIM Co., the firm which used to produce and market well liked Blackberry mobile phones, had monopoly in their smartphone class in 2009. Even being so big and resourceful, the firm did not show any adaptability to what phone users truly wanted in smartphones. The times were changing and it was the market of less costly phones which had platforms to run infinite number of applications. Market was literally shouting for the demand for more powerful and customizable OS's. In 2011, Blackberry faced the sought for failure of their ambitious Playbook tablet and from 22percent market share they climbed down to 9percent in the same year. It was observed by market expert that RIM's total revenue slashed by 1/4th in that year. Today, Blackberry has next to no share in the smartphone industry.

COCA-COLA IN INDIA

The well-known Coca-Cola Company is a corporation based in United States of America, which produces markets and distributes non-alcoholic beverages. The company is popular for drinks like the classic Coke, Thums-Up, Sprite, Fanta, Maaza, Coke Zero etc. The company also has a stronghold of 21 manufacturing plants which has the best resources in the country. It also boasts of one of the

greatest inventory too. The bottling of drinks is done at 27 companies owned bottling plants and 12 franchisees owned bottling plants. Coca-Cola has one of the strongest distribution systems in the FMCG market. The company sells the drinks at almost 2.6 million outlets and with the help of 7000 plus distributors. Distribution works with the help of hundreds of company owned trucks and a system which uses most high tech media to perform daily business activities. Executives use maps and GPS for full coverage, order is taken by the pre-sellers who are equipped with electronic gadgets for faster and precise working.

LITERATURE REVIEW

Even though the soft drink or soda companies have every resource they need, the sales of companies like Pepsi, Coca-Cola are either declining or stagnant and the main cause of this is change in the consumer preferences. The last two decades have changed the peoples view for looking at soda. Rising anti- obesity campaigns, consciousness about health and fitness, spread of various documentaries portraying sugar as a villain has affected the consumers mind. Various studies show that an informed consumer will not willingly buy the sugary soda and other sugary drinks for himself/herself and his or her family.

The article from Margot Sanger-Katz— “The decline of big soda” in New York Times published on 2 Oct 2016 describes aerated drinks as “NEW TO- BACCO”. On the other hand, numerous studies have already proved since the years the health hazards of consuming soda regularly on body weight and teeth. Drinking soda nevertheless continues as a regular habit and also a lifestyle in many countries. This consumption of sugar drinks with fuzzy ingredients has way more serious and

negative health effects than one can afford to ignore. The report published by Harvard T H Chan School of Public Health on 19 May 2009 says “People who consume sugary drinks regularly—1 to 2 cans a day or more—have a 26 percent greater chances of developing type 2 diabetes than people who rarely have such drinks”. The report also mentions that even moderate consumption on regular basis can increases chances of having a cardiac arrest or a fetal heart attack by 20 percent than men who rarely consumed sugary drinks.

Elisha McFarland, in her article “Why drinking soda is bad for you” published on Food Revolution Forum on 1 July 2016; states about other health hazards include the following:

- Harmful for kidneys and harms the functioning
- Soda comes in cans which have BPA content which has carcinogenic effects.
- Cola/ Soda are proved to dehydrate human body.
- Coloring present in typical sodas is known to be carcinogenic.
- Most of the Sodas are high in calories which cause obesity in adults and children
- It worsens heart diseases especially in men.
- Dental enamel gets wear away by acidic nature of soda.

CHANGES IN BEVERAGES MARKET GLOBALLY

On 20 Oct 2018, Kacey Culliney, in the article “Crisis Innovation” in Beverage daily says that it is evident from recent mergers and acquisition activities that companies are not necessarily looking at an attractive P&L while buying firms, preferring instead to pay a premium for new revenue streams that would allow them to capture sales growth. In 2017, ABInBev, for example, made an unconventional small purchase of Hitball, a provider of

organic energy drinks and energy waters, with 20 employees. The conventional alcohol players' continuous interest in 'no- and low-alcohol' drinks is noteworthy as it shifts to serving consumers looking for a healthier lifestyle from its vast beer portfolio. In a similar pursuit, Nestlé has continued to shift its portfolio towards a greater health and wellness-oriented organization. The food giant recently announced the disposal of its confectionary businesses, while making acquisitions in consumer healthcare (Canadian vitamin maker Atrium Innovations for US\$2.3 billion). This comes after buying Sweet Earth, a US-based maker of vegan and plant-based foods. Several soft drinks players, in major need of diversification, have been seeking companies offering healthy alternatives to sugar-based drinks. Unilever also bought Pukka Herbs, a British organic herbal tea company founded in 2001, to capitalize on the fast-growing organic tea market. Such product-focused companies possessing strong consumer presence and operating in a high-margin category provide an opportunity for larger food-and-beverage companies with established low-growth brands. The consumer giants are losing market share for their established brands to niche players offering premium and customized solutions that meet evolving customer preferences. This trend is compelling them to look for acquisitions to capture growth in new.

The giant cold drink organization, Pepsi Co. recently joined this race of healthy cold pressed juices in the international platform for cold-pressed juices. The company has successfully launched its flag- ship juice brand – 'The Naked Pressed juices'. This did not start or stop with Pepsi; many other companies have not only started but now are established names in the market of cold pressed juices. Juice Press, Hain Blue Print, Juice Generation, Liquiteria and Evolution Fresh

to name a few. Also it is evident that there is significant demand from all over the world for cold-pressed juices which can be confirmed by looking at the sales statistics of local giants like Australian Presha Food, UK's Juice Warrior, and India's very own RAW Pressery and famous American Suja Life.

The trend of healthy drinks is not limited globally with Pepsi and cannot be as their biggest competitor Coca-Cola, in their Brazil subsidiary has launched a brand called 'Agua de Coco'. As the name suggests, it is coconut water based drink. This comes with three Mango, Raw coconut and passion fruit flavors. This is evidence that even locally the companies are striving to provide the value in terms of health with the changing times. The problem with the big giants in soft drink sector is; these changes are going unrecognized at global levels and the healthy brands remain less marketed than the traditional drinks. Coke further expanded its Fruit juice product line and introduced orange, grape, mango, peach and guava flavors and the specialty of the new launches is they all have sugar amount reduced in all the variants.

While in Australia, 'Kombucha' a famous tea brand was taken over by the big Coke and is very much ambitious to shed their traditional image of unhealthy drinks locally. It aims to improve its reputation in on-going anti-sugar maneuver; but all this events or initiatives are not even close to what 'health drink' craze is and what the rising health enthusiast consumer base expects. The soft drink giant, still best known and recalled for airy, fuzzy and sugary sodas like Sprite, ThumsUP, CocaCola classic and Fanta, has now at least entered the alarmingly trending healthy Kombucha tea market by taking over few firms.

BEVERAGE MARKET IN INDIA AND COCA-COLA

In recent years Indian packaged drink market has seen some very promising alternatives for aerated drinks. Other brands like Paper-boat, Amul Chaas etc. market their products as traditional recipes but still are either sugary or having preservatives which are known for being unhealthy. Many small players have emerged with having vision of providing health by nutritious bottles of fruit and vegetable juice. Companies with substantial sales include Raw pressery, Fresh pressery, Juice Up etc. is solely based on cold pressed juices. Cold pressed juices are manufactured by fruits and vegetables undergoing through high mechanical pressure which extracts the pulp from them without damaging the nutrition value. This is different from other packaged fruit juices like Real fruit juice, Tropicana, Fruity etc. in which the essence of fruit is gained by heating them at high temperature which damage the essential vitamins and minerals. This may have some positive response in the coming decade due to having filled with essential nutrients as it is in the products and their rising popularity in the west.

OBJECTIVES OF THE STUDY

- To observe the changes in preferences of consumers who buy soft drinks
- To find the awareness and availability of packaged health drinks
- To study extent of consumers' desire for healthy beverage products from established brands like Coca-Cola.

METHODOLOGY

The sampling method used is convenience sampling. A survey conducted among 135 respondents.

Response can result in at least two possible outcomes. The Hypotheses is formulated about people's preferences. A null hypothesis and an alternative hypothesis are then formed. Sample Data is analyzed by finding the test statistic and its associated P-Value.

ANALYSIS AND FINDINGS

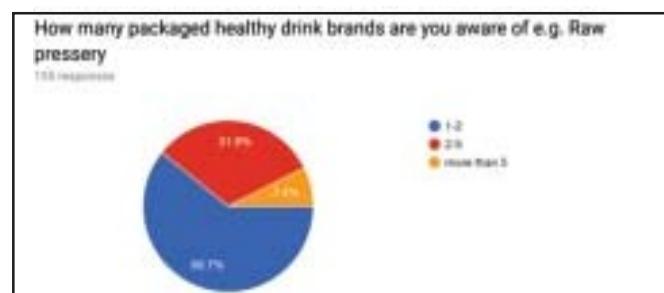


Figure 1

This question was intended to ask about the respondents' awareness about the brands which manufacture healthy drinks. Majority of the respondents i.e. 60.7 percent have responded that they are aware about 1 to 2 brands while 31.9 percent respondents said that they know upto brands. Only 7.4 respondents know more than 5 brands of the same.



Figure 2

When respondents were asked to rate the availability of the carbonated drinks and packaged healthy drinks, respondents have rated the availability of the carbonated soft drinks much higher than that of packaged healthy drinks.



Figure 3

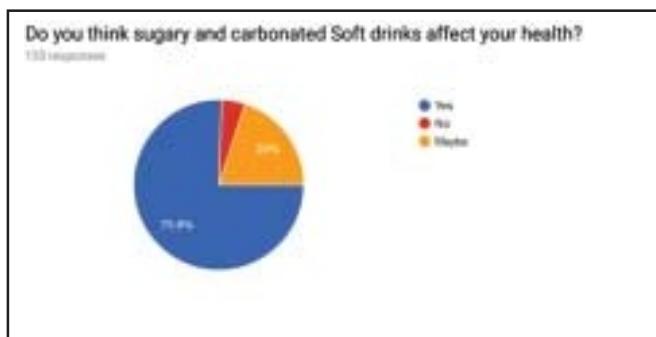


Figure 4

Over 75 percent of the people who have responded also think that sugary and carbonated softdrinks do affect their health and 20 percent of them think that the drinks might have some effects on their health.

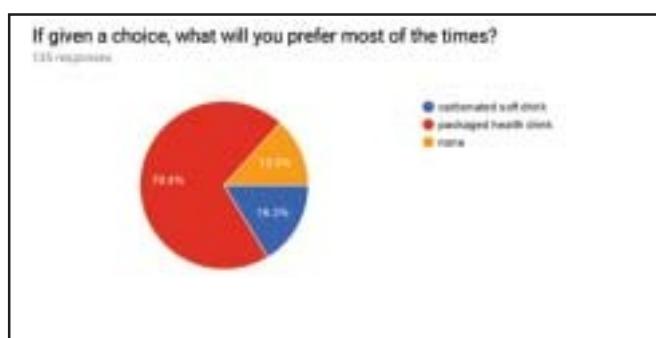


Figure 5

When asked about preferences between carbonated soft drinks and health drinks, 70 percent respondents said that they would prefer healthy drinks. Also 16.3 percent respondents replied that they will

prefer carbonated drinks and 13.3 percent said that they will prefer none of them.

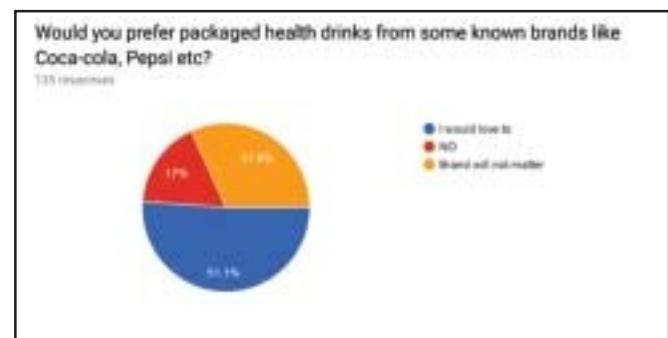


Figure 6

Majority of the people who have responded said that they will like to see healthy drink options from known and established brands like Coca-Cola, Pepsi etc. Although 51.1 percent said that they want healthy drinks from known brands, 31.9 percent say that the brand does not matter when it comes to buying packaged healthy drinks. Thus, it is suitable to interpret that 46.8 percent to 55.4 percent people want to see healthy drinks from the established and known companies like Coca-Cola and Pepsi.

HYPOTHESIS TESTING

1) Peoples' awareness about ill effects of sugary/ carbonated drinks:

H_{0a} : People are not aware about ill effects of sugary/carbonated drinks:

$$H_{0a}: \pi = 0.60$$

H_{1a} : People are well aware about ill effects of sugary/carbonated drinks:

$$H_{1a}: \pi > 0.60$$

Π = Proportion of people aware of ill effects of sugary/carbonated drinks in the population.

$$z = \frac{p - \pi}{\sqrt{\frac{\pi(1-\pi)}{n}}}$$

$$= \frac{0.756 - 0.6}{\sqrt{\frac{0.6(1-0.6)}{135}}} = 3.69$$

$Z_{\text{critical}} = 1.64$, Hence reject H_{0a}

Thus, people are well aware about ill effects of sugary/carbonated drinks.

2) People are preferring to shift from sugary and carbonated drinks to packaged health drinks:

H_{0b} : People do not prefer to shift from sugary and carbonated drinks to packaged health drinks:

$$H_{0b}: \pi = 0.60$$

H_{1b} : People prefer to shift from sugary and carbonated drinks to packaged health drinks:

$$H_{1b}: \pi > 0.60$$

Π = Proportion of people preferring to shift from sugary and carbonated drinks to packaged health drinks:

$$= \frac{0.704 - 0.6}{\sqrt{\frac{0.6(1-0.6)}{135}}} = 2.46$$

$Z_{\text{critical}} = 1.64$, Hence reject H_{0a}

Thus, people do prefer to shift from sugary and carbonated drinks to packaged health drinks.

CONCLUSION

The study shows that awareness of the availability of number of packaged healthy drink brands in market is limited. Also it can be generalized that the availability of the carbonated drinks is more than that of packaged health drinks. Majority of the respondents also think that sugary and carbonated drinks do affect their health. Most of the people who have replied said that they will choose a healthy option if given a choice and preference will be given to the known and established brands.

It is observable that respondents have rated the availability of packaged health drinks lesser than the same of carbonated soft drinks and as they have responded that they would like to have packaged health drink brands from known and established brands like Coca-Cola and Pepsi, the relevance of the study was proved when official statements from Coca-Cola India were published after the commencement of this study. T Krishnakumar, President and CEO, Coca-Cola India, stated that the company does not want to be identified for the fizzy drinks only. In the interview with Business Standard India, the president said that efforts on rebuilding the company are being made and new brands are being launched which have fortified with nutrients and sugar is being avoided. The company also aspires to be end-to-end beverage player that has the ability to serve consumers at every occasion.

LIMITATIONS

The questionnaire was responded by only 135 respondents which might be insufficient to conclude preferences of a larger population; also due to scarce resources, the study was performed on a random sample and may lack adequate diversity in age, gender, income groups etc. Another potential limi-

tation can be that the respondents may have responded to the questions in morally desirable manner e.g. one should always have healthy beverage. The study was limited to the questions framed in the same and is limited by the conceptual structure which was made to understand the awareness of the health trends, variables of preferences, and the comprehensiveness of the questionnaire used in the study.

ASSUMPTIONS

It was believed that respondents would respond openly and honestly to the survey. It was also anticipated that the survey instrument was a valid measure of preferences of a consumer and their buying habits are coherent with their responses. Further it was presumed that the survey questionnaire would be easily understood by all the respondents and they have adequate knowledge about healthy drinks and cold pressed juices.

RECOMMENDATION

Hence in the wake of the era of consumerism based on health and wellness, it is imperative for established beverage companies like Coca-Cola to come up with solutions which offer the precise satisfaction to the demands made by health conscious market.

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Business Agility: Applications of Artificial Intelligence in Management Education

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Abstract

Our progress in the field of Artificial Intelligence since the past two decades has significantly improved performance of Service & manufacturing Systems. However there has been no noteworthy progress in the role of Artificial Intelligence in the education sector. This paper reports the need of Artificial Intelligence as an important tool in today's education. In particular, the paper provides a broad review of how artificial Intelligence is already incorporated in various tools which would eventually help education sector to achieve agility.

Keywords: Artificial Intelligence, Management education, AI tools

INTRODUCION

Organizational Agility is a prime differentiator in today's fast changing business world. Sustainability in any business requires its ability to keep up with the pace of rapidly changing market. Organizations should be agile enough to expect, predict and adapt to changing market environment and reshape their business in response to the changes happening in market. It is a challenge for any business, to identify threats or opportunities, prioritize potential responses and accordingly act effectively. Numerous approaches such as business IT alignment,

Cloud computing enterprise architectures promise to provide solutions. One of the trending and relevant technology is Artificial intelligence which can contribute in several ways which can increase the agility of organizations. This research discusses some of the wide spectrum of contributions that AI has to offer in education sector and how it has proven beneficial in transforming management education.

With Internet of things and Machine Intelligence being the key factors influencing analytics and business strategies; now Robotics, Machine Learn-

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ing and Artificial Intelligence are moving ahead to gain importance in curriculum of Business Schools of the country which also include Indian Institute of Management.

Artificial intelligence (AI) as opposed to the natural intelligence is the intelligence demonstrated by machines. Artificial Intelligence research is the study of intellectual agents that increase their chances of achieving their objectives successfully, by continuous monitoring and analyzing the environment and taking actions accordingly.

AI has a vast scope that includes visual perception, speech recognition, decision-making, developing the machines in game playing, language detection, computer vision, robotics and many more. Human Intelligence aspects including reasoning and learning along with self-correction are demonstrated by machines in this way. AI Robot, Sophia is an example which shows that AI has shown unmatched growth. AI is bound to fill up every aspect of human life with its continuous progress.

ARTIFICIAL INTELLIGENCE IN EDUCATION SECTOR

As we move towards a more connected world, need for usage of AI in Education will increase extensively and the growth is estimated to be 47.5% according to a study conducted by eSchool News. The impact of this technology will exist anywhere from kindergarten to higher education, providing a way to improve students experience by creating features that are collaborative and adaptive. Students are bound to receive benefits even after completing their academics, as technology will provide information and guide them with job prospects that would be relevant to their key skills.

BUSINESS AGILITY IN MANAGEMENT EDUCATION THROUGH ARTIFICIAL INTELLIGENCE

As AI is transforming the world it is also transforming the field of education. Omni-choice learning pathways, Cognitive courseware, Virtual counsellors, AI-enabled course development & grading and Digital Ecosystems and purpose- driven objectives are some of them.

These are the four pathways in which AI is leading and will keep the new updates in the field of education. Through this it is also helping in changing the business models and with a rapid race of innovation, AI is creating relevant courseware for tomorrow's workforce by upgrading education today. These all tools as we have showed in contents will help support college education workforce by equipping it with latest education tech and new innovative ideas.

It gives a new option to students in the form of online education which is available anywhere at any time. Microsoft has also provided tools that help students in preparing notes / documents quickly or easily. Microsoft office have developed tools to improve educational and organizational applications thereby making them faster, simpler, easier and more accurate. Thus business agility is achieved in education through AI tools.

Artificial Intelligence for Management Education: Artificial Intelligence can help in accomplishing business activities that would be handled within fraction of seconds and also with higher accuracy as compared to humans. AI also offers a substitute for human judgment because it can forecast based on patterns in data that are undetectable by humans. It can also provide detailed analysis of the

capabilities and skills of the students individually which is a tough job to be done by professionals in educational institutes. With the detailed analysis and reports, relevant teaching can be done to enhance the understanding of the students for personal growth. These features can thus change the businesses to help them achieve things in profound ways. As industries start adopting the usage of Artificial Intelligence and Machine Learning to transform their businesses and processes, their effects would be magnified. Leaders in the industry would need to understand and take action on the wide range opportunities that Artificial Intelligence offers. Thus Role of AI in Management Education has a wide scope.

ARTIFICIAL INTELLIGENCE TOOLS IN MANAGEMENT EDUCATION

Artificial intelligence is emerging as a regular theme for Microsoft with respect to product enhancements. Microsoft's product such as MS office has been incorporated with AI and machine learning features. Microsoft Office is infused with Machine learning & artificial intelligence (AI) throughout app to save your time and help you do your best work; from authoring in Word to design the slides in Microsoft PowerPoint, automatically analyzing data in Microsoft Excel (with the Excel Insights preview) and much more. Moreover Microsoft office is having AI tools such as Autocorrect, Macros, etc.

LITERATURE REVIEW

Article written by Stefan A. D. Popenici & Sharon Kerr in 'Exploring the impact of artificial intelligence on teaching and learning in higher education'

The article highlights the future role of artificial

Intelligence in education sector and what roles universities can play in it. But it also points out the job displacements that may arise out of it.

The author recommends that teacher's role needs reconsideration and revaluation. It predicts how AI based algorithms can replace classroom teaching. Universities need to embrace AI as it presents new openings for education. Research Paper by Michael Baker in 'the roles of models in Artificial Intelligence and Education research: a prospective view' The paper investigates the phenomena of rise of use of AI in learning and teaching area. It predicts the implications of the technological advancements on the learning experience. It also emphasizes on the need for teachers and students to adapt to the same. The paper also identifies some challenges that the institutions and students might face during this process.

OBJECTIVES

1. To identify the level of awareness of Artificial Intelligence tools in Management students.
2. To identify the usability of Artificial intelligence tools by Management students.

HYPOTHESIS

H1: The level of awareness of Management students about AI tools is low.

H2: The usability of the AI tools by Management students is low.

RESEARCH METHODOLOGY

An in-depth descriptive study was carried out by conducting a survey using a questionnaire on level of awareness & usability of AI tools by convenient sampling method (n=120) in management students in Mumbai. Hypothesis testing is done with z test.

HYPOTHESIS TESTING

A] Awareness

Auto correct:

$$\Pi = 0.4$$

$$P = 11/120=0.0916$$

$$Z = \frac{P - \Pi}{\sqrt{\frac{\Pi(1-\Pi)}{n}}}$$

$$Z = \frac{0.0916 - 0.4}{\sqrt{\frac{0.4(1-0.4)}{120}}}$$

$$Z = -6.896$$

Since Z value for Auto Correct tool is less than table value for Z at 90% Confidence Interval (-1.64), we reject the null hypothesis

Consistency checker:

$$\Pi = 0.4$$

$$P = 25/120=0.208$$

$$Z = \frac{P - \Pi}{\sqrt{\frac{\Pi(1-\Pi)}{n}}}$$

$$Z = \frac{0.208 - 0.4}{\sqrt{\frac{0.4(1-0.4)}{120}}}$$

$$Z = -4.29$$

Since Z value for Consistency Checker tool is less than table value for Z at 90% Confidence Interval (-1.64), we reject the null hypothesis.

Dictate :

$$\Pi = 0.4$$

$$P = 60/120=0.5$$

$$Z = \frac{P - \Pi}{\sqrt{\frac{\Pi(1-\Pi)}{n}}}$$

$$Z = \frac{0.5 - 0.4}{\sqrt{\frac{0.4(1-0.4)}{120}}}$$

$$Z = -2.23$$

Since Z value for Dictate tool is greater than table

value for Z at 90% Confidence Interval (+1.64), we reject the null hypothesis.

Thesaurus:

$$\Pi = 0.4$$

$$P = 36/120=0.3$$

$$Z = \frac{P - \Pi}{\sqrt{\frac{\Pi(1-\Pi)}{n}}}$$

$$Z = \frac{0.3 - 0.4}{\sqrt{\frac{0.4(1-0.4)}{120}}}$$

$$Z = -2.237$$

Since Z value for Thesaurus tool is less than table value for Z at 90% Confidence Interval (-1.64), we reject the null hypothesis.

Forecast sheet:

$$\Pi = 0.4$$

$$P = 53/120=0.441$$

$$Z = \frac{P - \Pi}{\sqrt{\frac{\Pi(1-\Pi)}{n}}}$$

$$Z = \frac{0.441 - 0.4}{\sqrt{\frac{0.4(1-0.4)}{120}}}$$

$$Z = -0.91$$

Since Z value for Forecast Sheet tool lies between table value for Z at 90% Confidence Interval (-1.64, 1.64), we accept the null hypothesis.

Macros:

$$\Pi = 0.4$$

$$P = 58/120=0.483$$

$$Z = \frac{P - \Pi}{\sqrt{\frac{\Pi(1-\Pi)}{n}}}$$

$$Z = \frac{0.483 - 0.4}{\sqrt{\frac{0.4(1-0.4)}{120}}}$$

$$Z = 1.86$$

Since Z value for Macros tool is greater than table value for Z at 90% Confidence Interval (+1.64), we reject the null hypothesis.

$$Z = \frac{0.0833 - 0.4}{\sqrt{\frac{0.4(1-0.4)}{24}}}$$

$$Z = -3.167$$

B] Usability:

Auto correct:

$$\Pi = 0.4$$

$$P = 9/90 = 0.1$$

$$Z = \frac{P - \Pi}{\sqrt{\frac{\Pi(1-\Pi)}{n}}}$$

$$Z = \frac{0.1 - 0.4}{\sqrt{\frac{0.4(1-0.4)}{90}}}$$

$$Z = -5.809$$

Since Z value for Auto Correct tool is less than table value for Z at 90% Confidence Interval (-1.64), we reject the null hypothesis

Consistency checker:

$$\Pi = 0.4$$

$$P = 6/71 = 0.0845$$

$$Z = \frac{P - \Pi}{\sqrt{\frac{\Pi(1-\Pi)}{n}}}$$

$$Z = \frac{0.0845 - 0.4}{\sqrt{\frac{0.4(1-0.4)}{71}}}$$

$$Z = -5.43$$

Since Z value for Consistency Checker tool is less than table value for Z at 90% Confidence Interval (-1.64), we reject the null hypothesis

Dictate:

$$\Pi = 0.4$$

$$P = 2/24 = 0.0833$$

$$Z = \frac{P - \Pi}{\sqrt{\frac{\Pi(1-\Pi)}{n}}}$$

Since Z value for Dictate tool is less than table value for Z at 90% Confidence Interval (-1.64), we reject the null hypothesis.

Thesaurus:

$$\Pi = 0.4$$

$$P = 2/45 = 0.0444$$

$$Z = \frac{P - \Pi}{\sqrt{\frac{\Pi(1-\Pi)}{n}}}$$

$$Z = \frac{0.0444 - 0.4}{\sqrt{\frac{0.4(1-0.4)}{45}}}$$

$$Z = -4.871$$

Since Z value for Thesaurus tool is less than table value for Z at 90% Confidence Interval (-1.64), we reject the null hypothesis.

Forecast Sheet:

$$\Pi = 0.4$$

$$P = 3/19 = 0.1578$$

$$Z = \frac{P - \Pi}{\sqrt{\frac{\Pi(1-\Pi)}{n}}}$$

$$Z = \frac{0.1578 - 0.4}{\sqrt{\frac{0.4(1-0.4)}{19}}}$$

$$Z = -2.156$$

Since Z value for Forecast Sheet tool is less than table value for Z at 90% Confidence Interval (-1.64), we reject the null hypothesis.

Macros:

$$\Pi = 0.4$$

$$P = 2/16 = 0.125$$

$$Z = \sqrt{\frac{P - \Pi}{\Pi(1 - \Pi)}} / n$$

$$Z = \sqrt{\frac{0.125 - 0.4}{0.4(1 - 0.4)}} / 16$$

$$Z = -2.2467$$

Since Z value for Macros tool is less than table value for Z at 90% Confidence Interval (-1.64), we reject the null hypothesis.

CONCLUSIONS

Conclusions can be drawn that

1. Level of awareness of Management Students' about AI tools as Auto Correct, Consistency Checker, Dictate, Thesaurus and Macros is not low.
2. Level of awareness of Management Students' about AI tools as Forecast Sheet is low.
3. The usability of the AI tools by Management students is not low.

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An Empirical Study of Consumer Perception towards Scope of Artificial Intelligence in Offline Grocery Retail

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Abstract

Indian retail has witnessed a massive evolution fulfilling the diverse needs of the country given its size and complexities. The maturity of the retail sector took place with the establishment of retail stores in the locality for convenience with the organized retail sector. The entire retail scenario is expected to undergo dramatic changes in the next 10-15 years and organized retail is expected to penetrate the markets deeper. On the other hand, consumption habits of people are also changing in the technology driven and fast-paced world of today. The choices customers make when buying grocery are well informed and they are far more likely to embrace a variety of retail stores to ensure they get exactly what they want and when they want it. Several government reforms have increased the scope for organized retailing being an advocate for cashless and transparent economy. Thus, this sector has a large scope for integrating the technological revolution and create commercial as well as personal advantages for retailers and customers, respectively. The data used for recording weekly or monthly orders manually, would be fed into the system which will not only keep a track of the order but also track the buying habits of the consumer. This will ease the customer in terms of re-order hassle and may encourage new purchases based on their previous choices. Now is the time to adopt personalization technologies and Artificial Intelligence (AI) that can prove to be a game-changer for bricks-and-mortar stores in terms of getting real-time insights about shopper demographics, store traffic and dwell time.

This study captures the responses of different consumers in Mumbai Suburbs towards the application of artificial intelligence in offline grocery stores. The paper intends to analyze the consumers' perception towards automation in grocery shopping along with studying the industry trends.

Keywords: Artificial Intelligence, retail, grocery, consumer, shopping

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INTRODUCTION

Retailing, in India, is witnessing the transition period as the organized retail players are attempting to gain market share from the traditional age-old formats. Retailing is transforming into a fiercely competitive business which in return, requires retailers to continuously keep developing insights on the dynamics of consumer behavior and then formulate effective strategies to successfully survive in the market. In its entire attempt to attract customers, it is significant for retailers to know that why shoppers pick one retailer's store while avoid the other stores and what are the important factors that may influence store choice decisions and without this understanding of the buyer, the efforts of retailers would not produce the desired results.

Globally, the top three retail categories are grocery, apparel and furniture. The retail sector in India is emerging as one of the largest sectors of the economy and one of the top five retail markets in the world by economic value. India has replaced China as the most favorable market for retail expansion, supported by a fast-growing economy, increasing consumption rates, rising urbanizing population and a burgeoning middle class. Both existing and new players are working out with new retail formats. These emerging retail formats provide wide variety and offer an ideal shopping experience to customers with a variety of products and services, all under a single roof. Changing tastes and preferences of consumers are leading to radical transformation in ways of life and spending patterns and this in turn is giving rise to new business opportunities.

Under the umbrella of retail sector, food and grocery accounts for the largest share in revenue in India. Food and grocery retail in India exceeds US \$294 billion representing 16 percent of India's GDP.

By 2020, food and grocery segment is estimated to constitute 66 percent of the total revenue in the Indian retail sector, followed by the apparel segment. Grocery is one category which is frequently purchased and customers of different demographics are involved in it. Hence, it can be assumed that by identifying the important perception differences among different demographic customers with regards to store attributes, the traditional grocery stores would be able to plan out their strategies in a much more effective manner and face the challenges posed by the organized players.

Retail experience also is the latest battleground for the artificial intelligence (AI) and machine learning revolution. While there is a lot of hype around artificial intelligence and its potential to transform retail, it has the capability to impact the most essential shopping experiences: the grocery store. In the presence of abundant customer data and availability of product information, grocers today are in a unique position to apply artificial intelligence in other areas of the business as well. This disruptive technology will provide solutions to transform the retail experience by detecting underlying shopping habits of consumers, efficient marketing, bulk analysis of unfiltered and unstructured customer videos and feedback comments along with theft reduction. This shift from reactive to predictive model of grocery stores could revolutionize the way we shop for some of the daily household items, highlighting on suggestions we perhaps never even considered, all possible because of the opportunities presented by artificial intelligence for both retailers and customers.

LITERATURE REVIEW

According to Bender, "perception is in reality, the perception you give is the perception you have". The age old saying used to be, "perception is real-

ity". The new saying is "reality is reality". Perception means it is a process by which we become aware of change. A number of factors shape and sometimes distort perception. These factors can reside in the perceiver of the object or target being perceived, or in the contract of the satiation in which the perception is made. The perception process includes five distinct activities. The first activity is that of exposure to stimuli. The second states that attention to stimuli has to occur. During the third activity, organisation, people organise stimuli so that it can be comprehended and retained. The fourth activity is that of interpretation of the message. Information is retained during the last activity. In consumer behavior, perception is the entire process by which an individual becomes aware of the environment and interprets it so that it will fit into his or her frame of reference [Walters et al (1989, p. 333)].

Grocery products are the edible commodities that are purchased often or on continuous basis from supermarkets, usually at regular intervals of time. Traditionally, groceries are purchased where the consumer can inspect the product before buying (Klein, 1998). The sense of touch, smell and sight directly plays a role in influencing the buying decision of consumers. Also, the marketplaces are not just restricted to the perishable products; the durable eatables (such as canned and packet food) and non-food goods such as household appliances are also available (Schuster & Sporn, 1998). Hence, grocery shopping becomes an actual journey where physical activity is carried out and strong senses help determine the choice. Individuality of each potential customer also plays an important role in defining sales of grocery retail stores.

According to a study on Future of Grocery (Nielsen, 2015), majority of global respondents (61%) believe going to the grocery store is an enjoyable and

engaging experience. A similar percentage (57%) thinks grocery shopping in a retail store is a fun day out for the family. This presents the grocery retailers with opportunities to grow their sales even higher and ensure customer satisfaction that is even more enhanced. Artificial intelligence technology has and will make some interesting advancements across multiple industries and retail is no exception. Experts suggest that AI will definitely revolutionize retail. With the help of this disruptive technology, in-store digital enablement options can bring the ease, convenience and personalization into brick-and-mortar stores. In its Technology Vision 2017 for Consumer Goods Report, Accenture stated that 78% of consumer goods executives surveyed recognize AI's potential to disrupt the status quo of business/consumer interaction. 68% industry executives believe AI will have a significant impact on the industry over the next three years.

Companies have started developing AI applications for retailers because with this technology, retailers can do a variety of things to benefit their own businesses. Retailers are using AI to communicate with shoppers through personalized online experiences, conversational robots and chatbots and voice shopping. India-based Talespin and US-based Pega are two companies that have developed AI-powered mobile-/tablet-ready applications to help store associates provide assistance and recommendations to customers. Other companies, such as Kairos, use facial recognition and AI to identify customers and inform store associates about their preferences, as well as to measure foot traffic and demographic trends throughout the day, and even detect shoppers' moods and attention spans. Staff can take this information into account to deliver more personalized service, including presenting shoppers with offers that are triggered by their past purchase history. Bengaluru-based Capillary Technologies is providing offline retailers the power to

improve staff effectiveness and convert the customer queries into product sales through AI and machine learning. Utilizing the power of AI, the company is building a series of products for its in-store vision to empower retailers. One such product, “Campaign Personalization” looks at the past behavior, when the person bought a product, when the individual responded to the campaign and then starts suggesting about the product and the time slot in which it needs to be marketed.

OBJECTIVES

1. To understand the grocery shopping habits of consumers in Mumbai Suburbs.
2. To study the implications of Artificial Intelligence in offline grocery retail.
3. To study consumer perception towards the scope of AI in offline grocery retail.

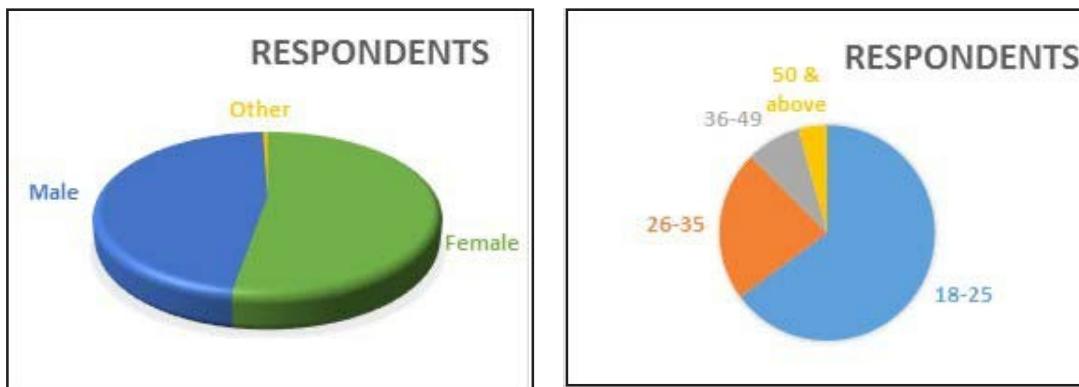
RESEARCH METHODOLOGY

This research study has been conducted with the help of primary and secondary data. For primary data, a sample size of 200 respondents within Mumbai Suburbs has been randomly selected. The method of collection of data was a structured questionnaire including close ended questions that elicited information and opinions of respondents. Since this study requires analysis of data, quantitative approach has been implemented. Google docs and MS Excel have been used to analyze the data. Simple percentage analysis has been applied for finding results. Descriptive analysis has been used to analyze and interpret data. Sources such as Retailers Association of India and other websites, news articles, published papers have been utilized as a source of secondary data. Personal details asked in the questionnaire were restricted to gender and age of the respondents. The questions asked in the structured questionnaire are as listed below:

S. No.	Questions	Remarks
1.	Would you consider yourself to be someone who enjoys technology and all of its use?	Y/N/Maybe
2.	Artificial Intelligence revolves around anything that is not organic, that can display intelligence similar to something that is living and breathing. Are you familiar with this concept?	Y/N
3.	How would you feel about having A.I. implemented in your routine shopping ?	Excited/Scared/Bit of Both
4.	How often do you purchase grocery?	Weekly/Fortnightly/Monthly/Rarely
5.	Where do you purchase it?	General Store/Supermarket/Hypermarket/Other
6.	How would you feel if the shopkeeper already knows what you intend to purchase and you get assistance for the same ?	Very Happy/Happy/Neutral/Unhappy
7.	Would you prefer advertising and marketing by these grocery retailers based on your shopping behavior ?	Y/N/Maybe
8.	Do you think this will save your time and money spent on groceries?	Y/N/Maybe

Findings:

We have found that not only adults, but also the millennials take interest in grocery shopping. During the survey, the gender base of respondents was 52.7% female, 46.8% male and 0.5% other. Also, 64.9% of respondents were from the age group of 18-25 years, 22.6% were between 26-35 years old, 8.2% were 36-49 years old and the remaining 4.3% were 50 years old and above.



The concept of Artificial Intelligence being anything that is not organic, but that can display intelligence similar to something that is living and breathing was familiar to 82.2% of the respondents. According to the findings of this study, majority (48.8%) of the respondents feel excited about having AI implemented in their routine shopping, 7.4% feel scared and the remaining 43.8% feel bit of both. Talking about the grocery shopping pattern of respondents, 38.6% of them said that they go for grocery shopping on a weekly basis while 40.1% of them go on a monthly basis and majority of them (45.4%) purchase grocery from hypermarkets.



Another important finding of the research is that while 35% of the respondents would be “very happy”, majority of the respondents i.e. 48% would be “happy” if the shopkeeper already knows what they want and also receive assistance for the same. About 58% of the respondents would also prefer advertising and marketing by these grocery retailers based on their shopping behavior.



Overall, out of the 200 respondents across Mumbai Suburbs, majority (59%) of them believe that the implementation of Artificial Intelligence will save time and money that is normally spent on groceries.

CONCLUSION

Technology, being an important part of an individual's life, will help reduce the skepticism encircling AI. The more people familiarize its presence as a daily phenomenon, the perspective will shift towards positive side. People are open to new experiences, which makes it easier for the grocery retail to adapt AI into the framework to benefit both the consumers as well as retailers. Looking at the findings we can conclude that people have an air of optimism about AI with a tinge of nervousness. This generally occurs when we are about try out something new. And when this new phenomenon translates into time and cost effectiveness, it is bound to become a routine/habit for consumers. Grocery will surely become a hassle-free experience for the customers. This will also help reduce tasks for women who can then give more time to their work and family, instead of spending hours strolling in the market bargaining for the lowest price with the vendor. Also, advertising according to the consumer preferences will not only help marketers gain new insights but also help them

devise proper budgets tailored to the changing consumer needs. This will help them predict trends and position their products more effectively. AI would enable retailers to gain direct feedback and this continuous data submission and learning can help them in making modifications that will directly be beneficial for the consumers in the long run.

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How Agile Businesses Looked Beyond Traditional Consumer Cohorts

Dr. Hufrish Majra & Binata Banerjee

BACKGROUND

Adapting to environmental changes in a dynamic environment and achieving results is what defines agility (Dove, 2002 & Sambamurthy et al. 2003). Agile organizations are resourceful, responsive and adaptable (Mathiassen & Pries-Heje, 2006). For any firm to survive, agility and speed to market is imperative. (Jerry Luftman et al., 2012).

Agility means knowing the threats and opportunities that a firm faces .The business should also have the competence to study uncertain environments for the firm so that it enables them to keep up with changing trends and opportunities.

In this manuscript we attempt to understand what the traits of an agile organization are. In the second stage of research, we propose to study the effect of organizational agility on delivering customer experience.

LITERATURE REVIEW

Agility is defined as a firm's "ability to detect opportunities for innovation and seize those competitive market opportunities by assembling requi-

site assets, knowledge, and relationships with speed and surprise" (Sambamurthy et al. 2003). Enterprise agility is defined as "the ability of firms to sense environmental change and respond readily" (Overby et al 2006). Roberts and Grover, 2012 defined a firm's customer agility, as "the degree to which a firm is able to sense and respond quickly to customer-based opportunities for innovation and competitive action". For the purpose of our study we shall take Roberts and Grover's definition of agility. In his definition he is addressing the individual customer.

An agile firm recognizes the opportunities or threats facing them in the environment hence making them a knowledgeable entity with a sensing capability. When a firm acts on these they are responding and showcasing their physical capability. (Dove, 2002). The firm's comfort, speed and skill of responding to a recognized threat or opportunity make them an agile firm y (Overby et al. 2006).

ORGANIZATIONAL AGILITY

Organizations which have higher sensing and responding abilities display high efficacy levels which

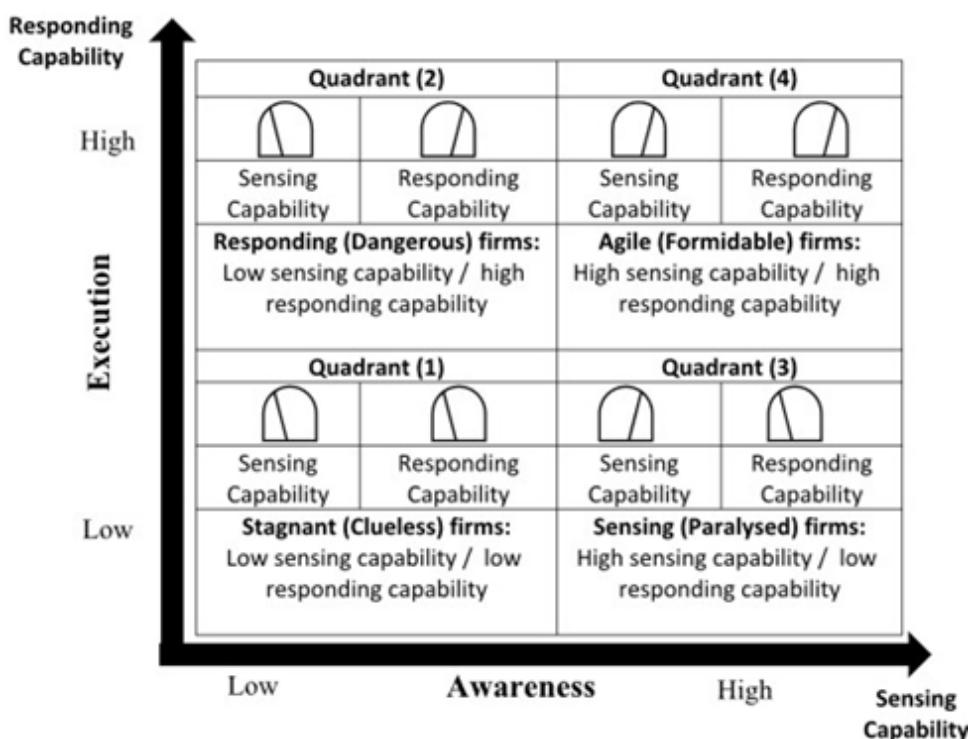
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in turn make them stand out from competition (Roberts & Grover, 2012). These firms are able to sense customer needs well in advance due to the insights that they gather from customer feedback and interaction. Based on these insights they are quick to implement customer suggestions and res-

pond to environmental changes alongside.

A key component of agility is flexibility. Flexibility in decision making, in responding to environmental changes and assessing growth opportunities are all elements of an agile organization.

Figure 1:



By dividing agility into its two fundamental components – sensing and responding, A 2 x 2 matrix with sensing capability on the X-axis and responding capability on the Y-axis to classify firms into four distinctive groups has been proposed (Overby et al 2006).

- Quadrant (1) Stagnant (Clueless) firms: Low sensing capability / Low responding capability. These firms are unaware of the changes taking place in the environment around them and are not good at responding too.
- Quadrant (2) Responding (Dangerous) firms: Low sensing capability / high responding capability. They are categorized as dangerous since they will respond quickly to change but their inability to make the right decision may make them respond erroneously
- Quadrant (3) Sensing (paralyzed) firms: High sensing capability / Low responding capability. Due to high sensing capability these firms are able to sense growth opportunities in the environment but due to slow response mechanism

may not be able to reap benefits.

- Quadrant (4) Agile (Formidable) firms: High sensing capability / high responding capability. These are indeed formidable organizations as they have both the sensing as well as the responding capability making them undisputed leaders.

CUSTOMER EXPERIENCE

A firm needs to offer much more than mere products and services, they need to orchestrate experiences, only then will they remain competitive. (Pine & Gilmore, 1999). Efforts have been made to propose a conceptual framework for this concept (Berry, Carbone & Haeckel, 2002). Customers are not only rational beings but also emotional beings who take decisions largely influenced by emotions.

“As a marketer you need to provide the right environment and setting for desired customer experiences to emerge” (Schmitt, 1999). Caru and Cova, 2007 in their book “Consuming Experience” throw light on a “continuum of consuming experiences” which range from experiences built by consumers, to experiences built by companies and then co-creation of experiences by consumers and firms. Customer experience is “holistic in nature and involve(ing) the customer’s cognitive, affective, emotional, social and physical responses to the retailer. This experience is created not only by those factors that the retailer can control (e.g. service interface, retail atmosphere, assortment, price), but also by factors outside of the retailer’s control (e.g. influence of others, purpose of shopping)”(Verhoef et al 2009)

“A customer experience is defined as the customer’s direct and indirect experience of the service process, the organization, the facilities and how the customer interacts with the service firm’s represen-

tatives and other customers. These in turn create the customer’s cognitive, emotional and behavioral responses and leave the customer with memories about the experience” (Walter et al. 2010)

Schmitt (1999) presented five types of experience marketing approaches, referred to as “Strategic experiential modules”: “sense,” “feel,” “think,” “act,” and “relate.” According to Schmitt, “sense marketing” appeals to consumers ‘senses (sight, sound, touch, taste, and smell). “Feel marketing” appeals customers’ deepest feelings and emotions, ranging from mildly positive moods linked to a brand (e.g., for a low involvement product) to strong emotions of joy and pride (e.g., for a high involvement product). “Think marketing”, appeals to the intellect in order to deliver cognitive, problem-solving experiences that engage customers creatively. “Act marketing” targets physical behaviors, lifestyles, and interactions. Finally, “relate marketing” creates experiences by taking into account individuals’ desires to be part of a social context (e.g., to their self-esteem, being part of a subculture, or a brand community).

ORGANIZATIONAL AGILITY AND CUSTOMER EXPERIENCE LINK

Agile (Formidable) firms as shown in figure 1 are the ones which will be able to sense the changing customer expectations as well as respond by taking tactical and strategic decisions to deliver a seamless customer experience. Overby et al. (2006) has highlighted that agility can be achieved by the firm by implementing new-age technology and gaining customer insights.

In a volatile environment it is imperative to keep abreast with customer changes and organizations have to be nimble by being technically savvy, motivating their workforce and gaining a foothold

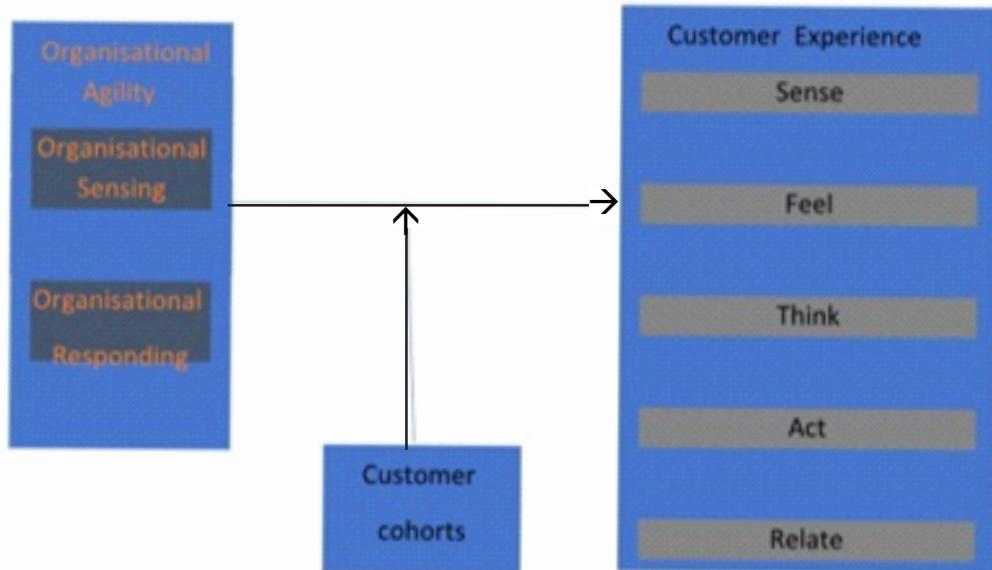
in new-age technologies. By doing this they will be able to meet customer needs. (Panda & Rath, 2016).

There is lack of studies linking organization agility and delivering customer experiences. Firms which

are flexible and constantly evolving are innovative and constantly striving for making customer experiences memorable. These firms with their dynamic business processes continue to offer state-of the art facilities to their customers which lead to customer delight.

Methodology

Nomological model



This study will address the following questions:

1. How does organizational agility affect customer experience?
2. How will this relationship differ for different customer cohorts?
3. How are these organizations better able to target new and upcoming consumer cohorts with innovative products/services?

RESEARCH METHODS

This is an applied research having an inductive approach. The researchers propose to in this paper study the literature on organizational agility and customer experience in the travel industry. In the

next stage of research, a formal consumer research is to be administered with the tourism brands to empirically study the relationship and the moderating effect of customer cohorts on it.

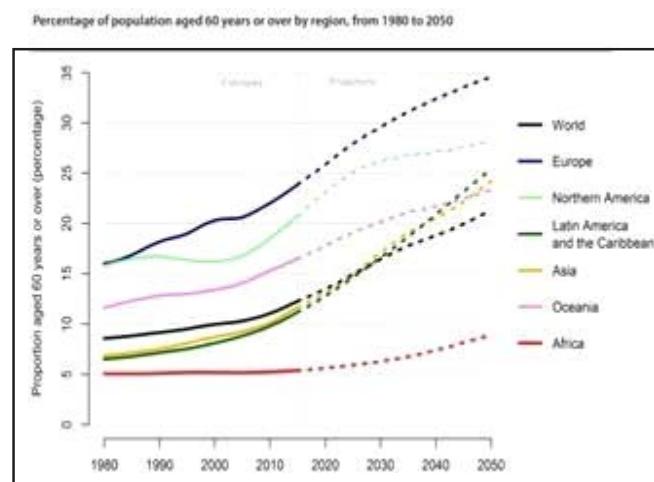
Evolving / Micro consumer cohorts Brands have traditionally looked at wooing young consumers perceived to have the highest purchasing power. There was always a stereotypical approach in targeting where certain consumer cohorts were assumed to be users of certain products/services. But consumer dynamics have changed phenomenally in the last decade. Businesses which have adapted themselves with evolving consumer perceptions have built sustainable brands over time.

The study has investigated some potential consumer cohorts that the brand marketer of the future cannot ignore. For the purpose of this study we have considered the example of the tourism industry and the cohorts are the solo travelers, only women group travelers and silver customers as travelers.

A peek into some statistics of these cohorts and why they cannot be ignored.

● The silver consumer

Globally, the number of persons aged 80 years or over is projected to increase more than threefold between 2017 and 2050.



Around 60% of the world's population lives in developing regions. The aging population in the developing world is growing at a faster pace than in the developed world. 80% of the world's aged population will be living in developing countries by 2050 it will generate 51 percent of urban consumption growth in developed countries and 19 percent of global urban consumption growth. The 60-plus age group will account for 60 percent of total urban consumption growth in Western Europe and Northeast Asia (Japan and South Korea).

Silver breaks tour package (Thomas Cook India)

Travel and tour companies traditionally target families or youth groups who are known to holiday together. Thomas Cook's internal research has, however, shown the emergence of a new target group for travel services – India's Gen S, or senior citizens, who usually have plenty of free time and disposable income. They are eager to travel for vacations and are physically fit to do so. The communication by the advertising agency of Thomas Cook, focuses on seniors who have never left the confines of their homes or towns, but can now explore the world. Thomas Cook has decided to reach out to this target group of elders who have never had the time or opportunity to travel for leisure before.

Thomas Cook's 'Silver Breaks – Senior Citizen's Holiday Plans' has been specifically created for the needs and requirements of senior citizens in India. The product focuses on the large population of eager tourists, who may even be traveling for the first time and are filled with apprehensions and concerns about venturing out on their own, especially at their age

● The solo traveler

A few interesting statistics on the solo traveler which clarifies why brands cannot afford to overlook this cohort. The 20 Adventure Trends to Watch in 2018, indicate solo travel is on the rise. 80% of the millennial travelers are going solo. Solo travelers wish to travel in solitude and explore the areas of the place they are visiting at their own pace and mix around with locals, basically doing their own thing. Many travelers now choose to go solo and explore new areas. Travel companies also plan their itinerary.

● Women only travel clubs (Women on Wanderlust)

These platforms provide opportunity to women who want to travel to destinations in the country and across the world but feel restricted to do so due to lack of family support and family approval. Hence WOW ensures that this woman only travel group attracts women interested in travelling across the globe along with other female travelers and by doing so encouraging building of strong friendships along the journey and ones which stay after that too.

Many travel portals and organizations are targeting various customer cohorts and the above examples illustrate the success that these organizations experience when they sense opportunities by tapping into unique and unexplored customer cohorts and responding to it at the earliest. The customers hence prefer to solicit these agile organizations as they have a pulse on the customers changing preferences and have products/ services that cater to their needs more than satisfactorily

CONCLUSION

All the above examples enumerate how renowned brands have delved into the psychographics of the new age consumer and targeted cohorts who are not mainstream. Their endeavor to remain agile has driven them to look for consumer segments beyond the obvious and the agility that the organizations display has helped them deliver fascinating customer experience. The researchers wish to take this research to the next stage where data collection amongst the various cohorts will be initiated. Data is to be collected from around 500 travelers. A pen and paper questionnaire will be administered to solo travelers, silver consumers and women only travelers.

This research will be useful for established and new-age tourism companies who wish to analyze and target upcoming customer cohorts

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Artificial Intelligence: The Good, the Bad and the Practical

* Disha Bhatia, Anushka Patgaonkar, Ankeeta Mane and Sumit Dhyani

Abstract

HR is primarily concerned with people management within organizations, with a major focus on policies and systems, designed to maximize employee performance. AI is intelligence demonstrated by machines, in contrast to the natural intelligence displayed by humans. The purpose of this research is to study the impact of Artificial Intelligence on Employee Relations and the Human Resources spectrum as a whole, to understand the employee perspectives regarding Industry 4.0 and how millennial perceive this transformation. The technology driven approach through AI tools have transformed various HR functions such as candidate sourcing, recruitment and selection, compensation and payroll, employee engagement etc. It is redesigning the functions of an organization to eliminate human errors and give accurate data at a faster pace. However in the current scenario, adaption to AI tools still remains a challenge to organisations and employees. Irrespective of their domains, employees find the smart technologies challenging, are concerned about these technologies replacing them and therefore are apprehensive while adopting the same. The major focus is also on how HR can enable people for the future of augmented work.

Every organization is affected by the environment it operates in and needs to modify itself on the basis of the changing demands in this environment. Another conflicting paradigm is that computer algorithms can never replace human empathy and intuition. AI would automate middle skilled employee functions however strategic decisions should be left to employees' discretion presently. The paper studies these diverse perspectives, their positive and negative influence on the organisations, expectations of millennial from work and how HR can enrich an employee's professional life with AI into picture, direct them with better career planning thus giving HR an edge over other organisational functions and create highly productive and efficient employees.

Keywords: Industry 4.0, Artificial Intelligence, Human Resources, Career planning, Employee Relations.

INTRODUCTION

Artificial Intelligence is an area which contains wide range of algorithms and machine learning tools that

can rapidly ingest data, identify patterns, optimize and predict trends. Due to its high potential, its adoption is being treated as the fourth industrial revolution which is commonly referred to as In-

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dustry 4.0. The current trend of automation and data exchange, cyber-physical systems, the Internet of things, cloud computing and cognitive computing all together amalgamates into the Industry 4.0. Speaking of the significance of AI in the industrial domain, it is revolutionizing how businesses work and has a massive impact on the current corporate scenario.

This paper majorly focuses on how HR can bring a difference in an Employee's life through AI. Human Resources is an organizational function dealing with the biggest asset of an organization which is the Employees. From their well-being to managing various functions such as employee performance, development and culture, understanding employee ROI is crucial and helps to evaluate their impact on any organization. AI would be replacing many traditional human tasks that are mundane and time-consuming. Although it may be a little too early to sound the alarm, AI in HR is definitely gaining its momentum.

Coming to Millennial, it is a modern term broadly given to a group of people which are of two types Generation Y (people born between 1981-1991) and Generation Z (born between 1991-2001) who are often at odds with each other. They require a defined career path. They also want the tools necessary to exceed expectations. Millennial and automation are hardwired with the same core character traits - efficiency, speed and connectivity. Research shows that Millennial are largely optimistic about the role automation could play in their future, Millennial digital know-how and passion for "the next best thing" make them the perfect candidates to drive automation forward. (Wheeler, S. A. (2017)).

Now with such a huge potential, AI would tend to

replace decision making and so would the decision makers. Therefore there is a massive need to have an appropriate career plan so as to reduce the fear of being replaced. Our future with AI in it is one where the professionals have to improve their abilities to produce value, think strategically and creatively, not just tactically only then will they become the power rangers of tomorrow.

However as exciting as it seems there is also a downside to this revolution due to the risks associated with it. AI cannot work without "Training data". All the AI algorithms need past data to function effectively. In case the current organizational practices are not up to the mark, the resulting solutions through AI would also be either biased, punitive or overly hierarchical. AI applications need to be transparent and tunable and need constant examination and up gradation. Also the risk of data security prevails in addition to which the hardware and infrastructure needs are not always reasonable for all types of firms in the business eco systems

Business executives admit they have not implemented AI because they are not exactly sure what it can do for them, how it can help their organization, how they can integrate it into their company or how to assess the ROI in the technology. In order to be very clear about what business problem can be solved using AI technology, HR should take the lead in shepherding AI software into the workplace, transforming the human resources function and enhancing the employee experience.

For instance, through predictive analytics a manager might discover that a highly efficient employee might tend to leave the organization and therefore his behaviour towards the employee would be affected but this information can also be used to

understand the consequences of this decision of the employee and thus help him change current practices so as to retain such talent. Therefore, it is crucial to learn the applications of behavioural economics so AI is used to the best of an organization's benefits.

LITERATURE REVIEW

The New Year will bring in more challenges to the human resources professionals. New laws, new technologies, and the growing gig economy are all set to change the face of human resources. (McGrath, D., & Damodaran, D. (2017, 12)) Indeed, even the label “human resources” and today’s most advanced HR competency models, operating structures, and deliverables will fail to capture the necessary evolution. (Boudreau, J. W. (2015)), The group foresaw that by 2025, HR will exist in a world of boundary-less work, detached from traditional employment. There will be a tsunami of big data on virtually every facet of work and the workplace. Workers will engage with work through a globally interconnected and democratized ecosystem that will have unprecedented ability to connect and share their views. (Boudreau, J. W. (2015)) Though the field of AI has been an area of extensive research since the term was coined in 1956, it has recently only led to large-scale deployment of intelligent applications for different domains and tasks. (Srivastava, S. K. (2018)). Over the last two decades, technology has drastically changed the way organizations operate. (Spahic, J. (2015)). The future requires a profession that seamlessly integrates disciplines such as procurement, marketing risk based options, global supply chains, and man-machine collaborative analytics.(Boudreau, J. W. (2015)) While significant advancements have been made in positioning HR to become more strategically oriented, companies spend millions on HR

research and analytics practices. (Falletta, 2008a). AI is at the peak of the hype curve right now. A lot of people are talking about it, but there's not a lot of understanding on how to really implement and deploy artificial intelligence to enhance people practices in the workplace. AI has the potential to offer personalization at scale, beginning with the hiring and onboarding processes. The first area we are seeing early traction in using artificial intelligence is in screening and interviewing new hires. One of the areas HR is struggling with is how to offer internal mobility to employees. As employees stay in their roles longer, companies are looking for easy ways provide employees with recommendations for new job roles to pursue within the company and the relevant training needed for these. Artificial-intelligence-powered platforms are being explored as the optimal solution for internal talent mobility.

The technology will predict how likely an individual is to leave the organization. Then it's the job of the people analytics team to identify employee groups in key job roles at risk of finding new opportunities outside of the company and to propose a program of manager intervention to prevent departures. (Alexandria (Aug 10, 2018)).

Administrative tasks such as basic HR metrics, compensation, and staffing can now be streamlined, which allow HR professionals to move toward more sophisticated HR functions like gathering complex data and information, enabling benchmarking of HR metrics, and capitalizing on the unrealized potential of strategic use of human capital. As a result, HR professionals have the ability to significantly contribute to the bottom line through better human capital management (Spahic, J. (2015)).

Nonetheless, little is known about the extent to

which global firms perform HR research and analytics activities and how these disparate data collection efforts inform HR strategy, decision making, and execution (Falletta, 2008a).

Considering the Millennial perspective, One of the most vocal frustrations expressed by them was that employers too often overpromise and under deliver with regard to benchmarks and expectations. Career paths are often based on timing matrices, rather than results. Successful younger professionals want assurance that if they appear well on the path to success, but that the process is taking slightly longer than expected, that the opportunity for advancement will still be there. (Aurora (March 2018)). Employee loyalty is best achieved when expectations are clearly defined, when the work environment is conducive to career advancement, and when the employer provides the necessary tools to allow them to succeed. Conversely, employers are loyal to their employees when the employees embrace the culture of the company; use the tools made available by the employer, work to advance the organization as well as their personal goals; and contribute to the well-being of the entire organization. The path to success is mutual and should be communicated upfront, without any ambiguity, in the interviewing process and during employment. Young professionals aspire to be well trained, knowledgeable, and strong participants in the industry. One of the challenges for the industry is the means to expedite education and training. Millennial in the industry want immediate gratification and success. Although the equipment leasing and finance industry is not difficult to learn, it often takes hands-on experience and time to fully understand the many nuances involved in originating, underwriting, funding, and collecting strong, well-performing assets. (Scott A. Wheeler)

STARA awareness captures the extent to which an employee views the likelihood of Smart Technology, Artificial Intelligence, Robotics and Algorithms impacting on their future career prospects. This approach, developed for this study, is positioned within the career-planning literature with Greenhaus and Kopelman (1981), suggests that career planning has several key and sequential parts. These parts are based on the information surrounding: (1) one's interests, values, and talents, (2) the workplace opportunities, and (3) work—family/leisure interests. The individual may also have their own goals and strategies to achieve their desired career outcomes. Overall, career planning refers to individuals outlining future career developments and to their setting and pursuing career goals' (Zikic & Klehe, 2006: 393). It is important to note that career planning is an ongoing process that is assessed and carried out over one's lifetime. Early career-planning research by Gould (1979) suggested that employees with higher levels of career planning had more effective careers.

The impact from STARA is also likely to increase the prominence of the boundary less career. Inkson summarized what is happening to careers by stating that 'the old picture of stable employment and associated organizational careers is fading' (2006: 297). The way we view careers needs to be dynamic, ever changing, and unexpected. However, we can see these changes to careers as opportunities that can be capitalized on (Krumboltz, 2009).

Given that STARA is likely to change employment in a profound way, it is expected that the very nature of career planning is at a pivotal time. For example, if we take the future predictions from Frey and Osborne (2013) and look at them based on the traditional model of career planning (Greenhaus & Kopelman, 1981; i.e., assessing values, talents,

workplace opportunities, and work—family/leisure interests), there is a large disconnect. This is important because Baruch discussed the rate of change with technology, and how these changes ‘have wide implications for the management of people at work, and in particular the planning and managing of careers’ (2004: 58).

If the predictions of Frey and Osborne (2013) are even partly correct, workplace opportunities could be reduced significantly, making it harder to plan one’s career. This in part makes an employee’s values and talents, as well as work—family/leisure interests, irrelevant to the career-planning process. For example, an employee with a personal love of vehicles and a talent for driving long periods can still be replaced by driverless vehicles. Within the career-planning process, we consider STARA awareness to be an extension or a part of how an employee considers their future career prospects within their current job, workplace and industry.

In addition, several ethical issues have emerged with respect to the use and application of predictive analytics in terms of HR decision making (Bassi, 2011). Therefore, this research investigates the extent to which global firms perform HR research and analytics and how the resultant data are applied. By comparing these practices across industries, best practices can be identified and shared among participating companies. This will also allow the researcher to build a practical framework to advance HR research and analytics practices in organizational settings. Spahic, J. (2015)

OBJECTIVES OF THE STUDY

To study:

1. The penetration of Artificial Intelligence in HR functions

2. How career planning can be enhanced with the advent of AI
3. The Millennial perspective of AI
4. How HR can enable people for the future of augmented work
5. And recommend a model for effective implementation of Artificial Intelligence in organisations.

RESEARCH METHODOLOGY

It is a descriptive research where the questionnaire consisted of 16 different questions wherein 200 HR professionals were asked to give feedback and thoughts about AI in HR functions, out of which only 35 responded. The questions included various advantages and disadvantages of HR functions (recruitment, on boarding, employee engagement, payroll and compensation, training and development, attendance, employee retention, performance management, emotional quotient, individual biases, also to know if AI is better than HRIS).

The impact of AI on middle skilled functions of HR and whether it is going to enhance or empower the human aspect of human resources or overpower it up to a point where HR employees fear losing their jobs.

Despite these challenges and risks, the upside is enormous. As AI systems in HR get smarter, more proven, and more focused on specific problems, we will see dramatic improvements in productivity, performance, and employee wellbeing. We just have to be patient, vigilant, and willing to invest and plan professional career path accordingly.

Analysis

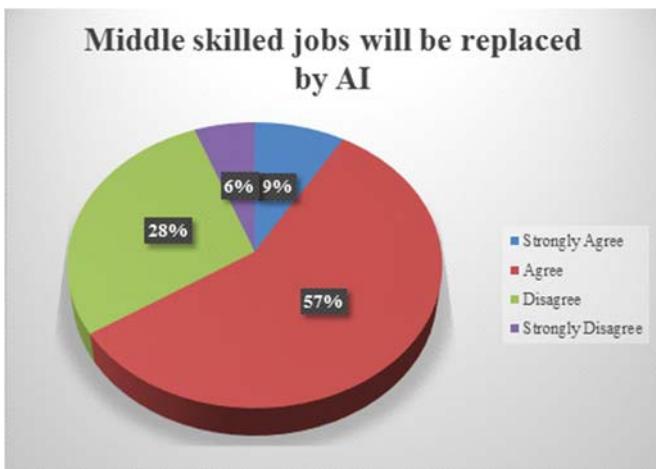


Fig 1.1 From a formal survey procured from 35 HR employees from the age group of 22-45 years, we conclude that 57% of respondents AGREE, 28% of respondents DISAGREE, 9% of respondents STRONGLY AGREE and 6% of respondents STRONGLY DISAGREE wherein our 2nd objective was fulfilled as AI entered that middle skilled jobs will be replaced due to AI.

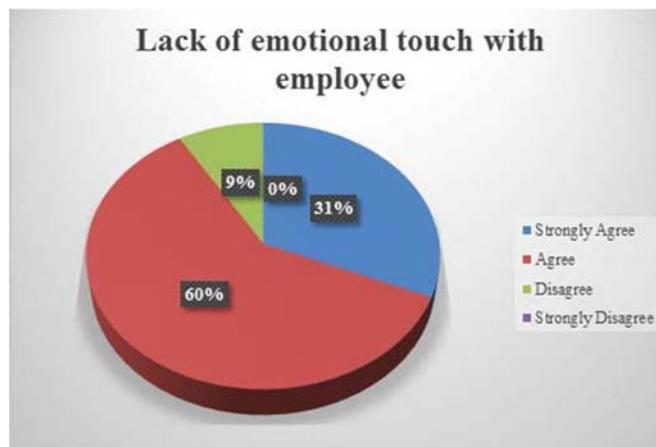


Fig 1.2 From a formal survey procured from 35 HR employees from the age group of 22-45 years, we conclude that 60% of respondents AGREE, 31% of respondents STRONGLY AGREE, 9% of respondents DISAGREE that there is lack of emotional touch with the employees due to AI.

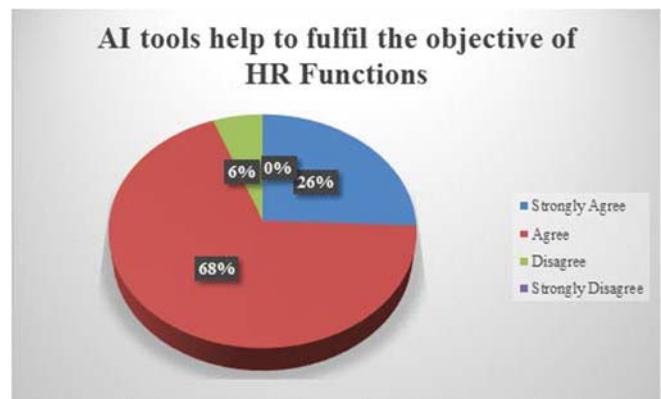


Fig 1.3 From a formal survey procured from 35 HR employees from the age group of 22-45 years, we conclude that 68% of respondents AGREE, 26% of respondents STRONGLY AGREE, 6% of respondents DISAGREE that AI tools help to fulfil the objective of HR Functions.



Fig 1.4 From a formal survey procured from 35 HR employees from the age group of 22-45 years, we conclude that 52% of respondents AGREE, 14% of respondents STRONGLY AGREE, 34% of respondents DISAGREE that On boarding process has eased with the AI tools in your organisation.



Fig 1.5 From a formal survey procured from 35 HR employees from the age group of 22-45 years, we conclude that 37% of respondents AGREE, 20% of respondents STRONGLY AGREE, 43% of respondents DISAGREE that recruitment of candidates has become smooth due to AI implementation.

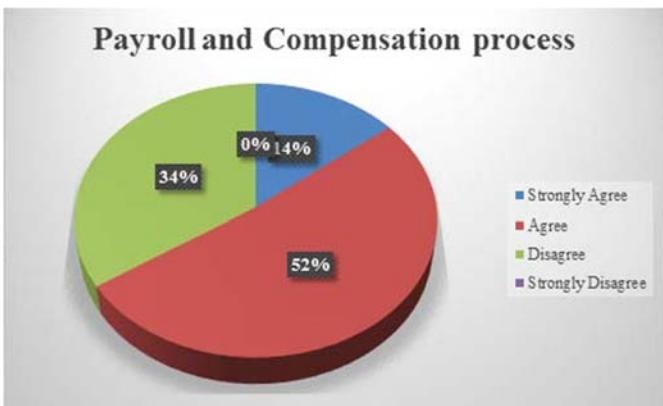


Fig 1.6 From a formal survey procured from 35 HR employees from the age group of 22-45 years, we conclude that 52% of respondents AGREE, 34% of respondents DISAGREE and 14% of respondents STRONGLY AGREE that Payroll and compensation process is quicker due to AI implementation.

ASSUMPTIONS

1. It was believed that respondents would respond openly and honestly to the survey.
2. It was anticipated that the survey instrument was a valid measure of HR research and analytics practices in terms of content validity.
3. It was presumed that the survey instrument would be easily understood by all the participants (e.g., those who perform HR research and analytics as well as HR generalists, HR business partners, and other HR leaders).

LIMITATIONS

The study was limited to surveying HR practitioners within various organizations. Additionally, the sample of participants for the study was selected from an external database of over 400 HR practitioners; hence, the sample is considered to be a convenience sample since it may accurately represent all HR practitioners currently employed in the organizations.

Another potential limitation is the number of respondents who chose to participate in the study. As

such, the results may not be generalizable to the entire sample population. Further, potential bias may be present in that participants might have responded to survey items in a socially desirable manner, particularly with regard to questions related to ethics. However, given the current interest on the topic, the social desirability effect is not expected to be a significant limitation. Participants were assured confidentiality and anonymity in the pooled results to mitigate such bias. Lastly, a web-based survey instrument was used as the data collection method.

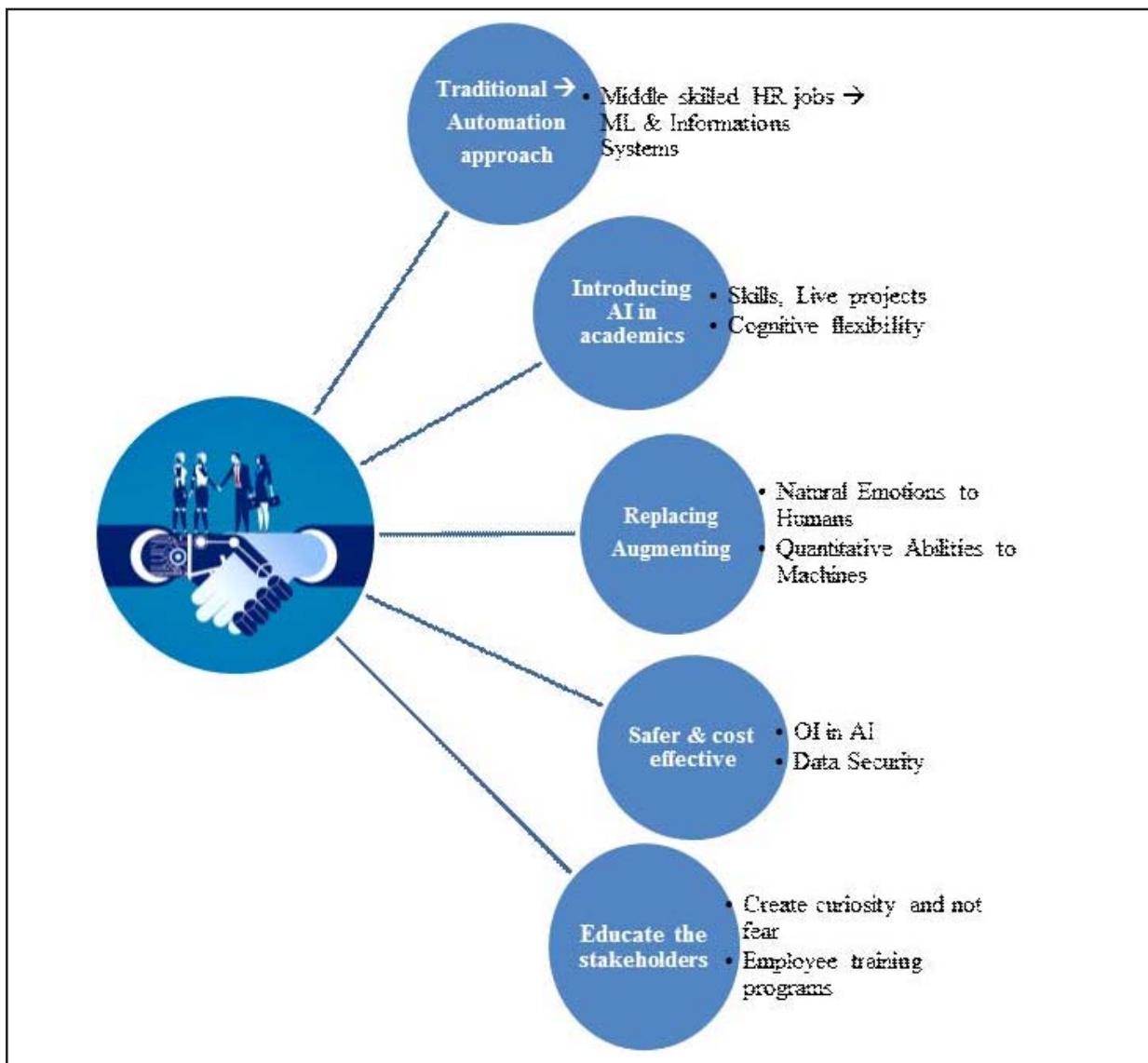
DELIMITATIONS

The study was limited to the research questions posed and bounded by the conceptual framework, streams of research described earlier, variables of interest, and the comprehensiveness of the survey instrument used in the study.

NEW KNOWLEDGE FROM THE FINDINGS OF THE STUDY

1. Align HR with Value Creation for Organizations that Win. Articulate a new HR charter and contribution model that describes the essential contributions companies will need from our field to successfully compete in the future.
2. Improve the Expectations of HR's Key Constituents. Define what is needed to move beyond today's constituent expectations of HR, then improve those expectations with evidence that this role leads to improved value creation.
3. Rewire the Work and Tools of HR. Define the processes, practices, systems, and operating models that drive HR's deliverables and outcomes.
4. Ensure the HR Talent Pipeline. Crystalize a new set of professional requirements based on current research that explores the needs and gaps in the HR profession.

Suggested Model



The model aims at identifying gaps between currently existing Artificial Intelligence tools and practices and expected requirements in the current scenario.

Step 1: Transitioning from traditional approach in the administrative space and at middle skilled HR level to an automation approach is the basic need of the hour. HRIS systems implementation by firms

at all sizes is the first step towards building a digital Indian ecosystem. All the traditional HR Functions such as managing leave and attendance, recruitment, sourcing candidates has to be completely automated through HRIS software.

Step 2: The biggest threat to the millennial is technology taking over. The result of this would be loss of jobs therefore cognitive flexibility should be deep

seated in the academic stages not just restricted towards courses pertaining to analytical studies. Aspiring HR students should undertake live projects where they can analyse how to improve employee motivation of someone who wants to quit or the parameters impacting employee high or low productivity, studying emotional quotient etc. They need to be initially trained to gather relevant data and infer logical problem questions.

Step 3: Many companies use AI to automate processes, but those that deploy it mainly to displace employees will see only short-term productivity gains. Firms achieve most significant performance improvements when humans and machines work together. AI can give certain characteristics for HR functions such as job evaluation and performance appraisal but the final decision of whether to appraise someone basis of performance plus character should be left to humans. What comes naturally to people (for example sarcasm) can be wily for machines, and what's up - front for machines (like analysing gigabytes of data) would be ideally impossible for humans. Thus there needs to be augmentation of all the systems through collaboration of the strengths of Human and AI such as team work, creativity, speed and agility and not one replacing the other.

Step 4: The major short comings of AI is the costs associated with it along with the complex infrastructure. A 'One Intelligent' software should be available to accomplish end to end HR functions thus saving the time and recurring cost supplementary to those.

Step 5: In order to reduce the fear it is the need of the day to make the employees strategically independent which can be done by implementing analytical tools and functions at all levels. The main

aim is to improve employee personal productivity So that they can solve a business problem using AI technology.

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Business Agility: Industries Adapting To Plastic Phase Out

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Abstract

For more than 100 years plastic has been one of the most important materials we used to create the stuff of our physical wants. Plastics are used widely everywhere in our life. It makes our life easier and better. They provide infinite use in human society and has become the ubiquitous symbol of urban life. Each day people are becoming more and more dependent on the use of plastics because of the characteristics of plastic such as inert, durability, flexibility and versatility and so on. The durability of plastics means that they persist, perhaps eternally and forever, in the environment, creating an unsolved problem of pollution and waste. To tackle the problems caused by plastic many countries are imposing a ban on its usage. Though this move is made by keeping the environment in mind it has directly and indirectly affected many industries who depend on these products for their day-to-day functioning.

This paper provides a comprehensive survey on how businesses are showing agility in its functioning by replacing the single use plastic products with not so damaging alternatives. Furthermore, the paper will present alternatives to the single use plastics that the businesses and consumers can adopt that are sustainable, reusable, biodegradable and environment friendly.

Keywords: Agility, Plastic, Reusable, Green

INTRODUCTION

In the early 20th century, plastics were quite a novelty; there were only a handful of plastics and very few uses. Zoom the clock forward 100 years and it's hard to find things that we don't use plastics for. Everywhere you look, you will find plas-

tics. Plastic products help make lives cleaner, easier and enjoyable. Plastics are found in the clothes, houses, and cars. The mobile phones we use, the televisions we watch, the computers, laptops all contain plastics. Plastic compounds contain atoms such as oxygen, nitrogen, or sulfur in their backbone chains, in addition to carbon, which are a serious

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risk factor for human health and environment. Different human health problems like irritation in the eye, respiratory diseases, liver dysfunction, cancers, skin diseases, lungs problems, headache, dizziness, cardiovascular causes for using toxic plastics. Plastics cause serious environment pollution such as soil pollution, water pollution, and air pollution.

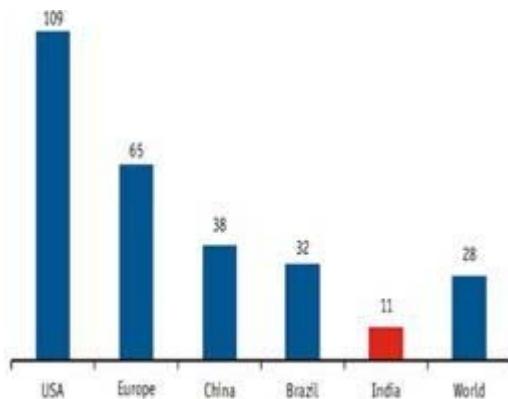
To counter all these problems, the countries need to take action to control the consumption of plastics by its citizens. From June 23, 2018 India's second most populous state Maharashtra imposed a ban on the manufacturing, use, sale, distribution and storage of all plastic materials. The government decided against plastic to check the damage caused to the environment.

Many countries have undertaken such an initiative. Over the past decade, a significant number of local, sub-national and national governments have passed legislation to curb the use of plastic shopping bags in diverse manners all over the world. Countries worldwide like Bangladesh, Ireland, Australia, Rwanda, China, are some of them.

After finding that they nearly choked the drainage system during floods, Bangladesh became the first country in the world to ban thinner plastic bag. In 2002, Ireland introduced the plastic bag tax, known as the PlasTax after which the country saw a significant impact almost instantly, with plastic bag consumption dropping by 94%, rendering plastic usage unacceptable.

In Australia the introduction of the "Zero Waste" program in South Australia led to the first statewide lightweight bag ban being introduced in October 2008. It is estimated that this move has saved 400 million bags annually. In the same year, Rwanda

implemented a strict plastic ban policy, which helped increase the air quality that was degrading due to inherent burning of plastics and helped reduce flooding and erosion.



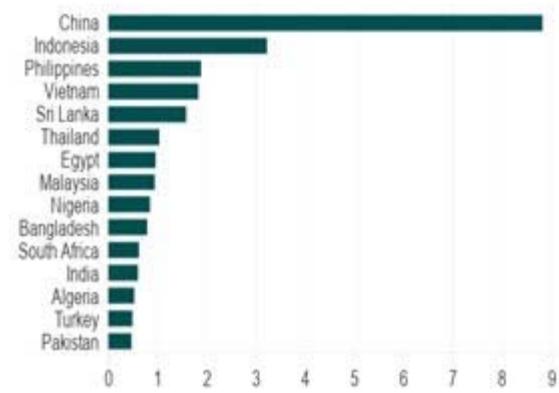
Source: AIPMA and Plastindia, TATA Strategic Analysis

Figure 1. Plastic consumption of different countries in thousand tons

Indian cities generate 11,000 tons (Figure 1) of plastic waste, enough to fill 1,100 trucks, at 10 tons per truck of which 6,600 tons are collected and processed/recycled, while the remaining 4,400 tons, or 440 truckloads, usually litter drains, streets or are dumped in landfills, according to an assessment report of the Central Pollution Control Board (CPCB). Experts have estimated that annual waste generation in India will increase to 165 million tons by 2030. This means that around 66,000 hectares of land is needed to set up a landfill site which is 10 meters high and can hold up to 20 years' waste. That is almost 90% of Bengaluru's area. In India, on June 5, 2018 Prime Minister Narendra Modi announced an ambitious pledge to eliminate all single-use plastic in the country by 2022. Twenty Indian states have a complete ban on manufacture, supply and storage of polythene bags and other plastic items such as cups, plates, spoons, glasses while five states have a partial ban. This has caused the companies to come up with new and innovative ways to deal with the effects of plastic ban.

Which countries produce the most plastic waste?

Top 15 countries worldwide that mismanaged plastic waste in 2010
(million metric tonnes)



Source: sciencemag.org

BBC

Figure 2. Top 15 countries worldwide that mismanaged plastic waste in 2010(million metric tons)

LITERATURE REVIEW

Plastics are a ubiquitous packaging material and are used across the globe. Predominantly 7 types of plastic – PET, HDPE, PVC, LDPE, PP, PS or other types - are used in packaging of variety of products. A wide variety of products - from beauty and personal care products to packaged food and beverage products to home care products are packaged in these plastics. Plastic pollution is impacting our waters and marine life, as well as our food chain and the public health. The good news is that global initiatives to reduce or eradicate the consumption of single-use plastic have been gaining momentum.

The snowball effect

One assumes that the direct effect of banning plastic use is that plastic wastage decreases, but the reality is broader than that. Plastics is an industry of its own that makes a significant contribution to key sectors in India like food, textiles and healthcare. That being said, one sector that will be

hit the hardest by the plastic ban is the packaging sector.

1. Job loss

In Maharashtra, specifically, All India Plastic Manufacturers Association (AIPMA) claims that the total plastic ban will result in the shut down of 2,150 industrial units. It will affect polymer manufacturers, plastic processors and recycling players. Especially those that work in extrusion, which would include the manufacture of plastic bags and blow moulding which is how bottles and containers are made. So, it's a fairly straightforward correlation that when there's unemployment in one sector then the supply of labour will increase. It should be noted that the plastics industry is highly labour intensive and largely unorganized. In India, there is already a surplus of low wage labourers.

2. Gross Domestic Product (GDP) will be affected
As of 2017, the Indian plastic industry contributes around 7.1% to the country's GDP. It's also complementary to the petrochemical industry that works in tandem. But, the ban itself hits the 'end user market' where plastic products are primarily used for domestic purposes.

Additionally, the packaging industry is one of the key drivers of demand for plastics. It's one of the fastest growing industries with a compound annual growth rate (CAGR) of 15% over the last five years. It has received major impetus from retail growth, changes in lifestyle, and growth of smaller packaging. The implementation of a strict ban would be a fairly large obstacle for the plastics industry to compensate.

In Maharashtra itself, the plastics industry is fairly big. In fact, plastics contribute to around 35% of the state's GDP with a turnover of Rs.50,000 crore.

3. Bad loans in the banking sector will increase

As the demand for plastics falls, a lot of micro, small and medium units (MSMEs) in the plastics industry, could default on loans and the proportion of bad loans could increase.

This is especially true as one analyses the downstream supply chain of plastics. While polymer manufacturing is dominated by large industrial groups, plastic processors and recycling players are largely MSMEs.

4. Cost of going green to consumers

More than the plastics sector, industries that depend on plastic for packaging will have to find alternative green methods of presenting their commodities in the market. Nonetheless, there's evidence to support the fact that firms generally pass on this cost onto their consumers where they can purchase a paper/reusable bag at nominal rates.

Problem of replacing plastic with paper

There's the crux of the issue. More than the repercussions of the plastic ban, what matters is how the ban is embraced by the public. The use of paper bags is only effective if they are reused, otherwise the problem shifts from plastic pollution to deforestation. And, if climate change is the primary concern, banning plastics might not even necessarily be the right solution.

OBJECTIVES

The purpose of this study is to:

1. Evaluate the broad-based impact of ban on plastic packaging on Businesses, consumers, economy and environment.
2. How businesses are becoming agile and what innovative, technological as well as creative developmental strategies they are adapting with

respect to phasing out plastics from their operations.

RESEARCH METHODOLOGY

This dissertation makes use of both quantitative and qualitative research strategy, where the research approach implemented has been that of interpretivism. Interpretivism is an approach which is implemented by the researcher in order to synthesize facts which are derived mainly from secondary sources, and which are qualitative in nature. In case of Quantitative approach, data of few companies have been prepared to see the before and after effect of plastic ban. The sampling strategy incorporated study of different sectors from packaging to e-commerce to come on a common conclusion in understanding Agility of Businesses towards imposition of plastic ban. This paper is based on published resources of *Amazon Prime Now*, *CLICK and COLLECT*, *McDonald's* and through telephonic conversation with *Envigreen Biotech India Pvt. Ltd.* to understand Economic Externality Effect. Detailed study of the same is shown below.

Plastic Ban has caused some companies to come up with innovative ways to deal with its effects. These companies have made successful efforts and changes in their operations.

AMAZON PRIME NOW

In December 2014, Amazon started offering the service Prime Now. It first launched in parts of New York City, and is now in United Kingdom, France, Germany, India, Italy, Japan, and Spain. It allows members to have products delivered to them within one hour for a fee of Rs.999 annually or within two hours for no additional fees.

Table 1. Companies that showed agility towards plastic ban

Company	Measures	Impact
TESCO	<ul style="list-style-type: none"> Removed all polystyrene from all its perishable goods packaging. Replaced two layer plastic trays with single layer plastic. 	<ul style="list-style-type: none"> Reduced 92 tons of plastic usage in a single year
Sainsbury's	<ul style="list-style-type: none"> Remove all plastic cotton buds in stores Recycles carrier bags Redesigned its two-pint milk bottles 	<ul style="list-style-type: none"> 33% reduction in its own brand-packaging Saves 580 tons of plastic a year by redesign
ASDA	<ul style="list-style-type: none"> Introduced "skin" packaging on some of its meat products Made its two-litre own-brand water bottles lighter 	<ul style="list-style-type: none"> Reduced the weight of its packaging by 27% since 2007
Morrison's	<ul style="list-style-type: none"> Recycles its carrier bags and uses "returnable bins" for fish products to reduce the use of poly boxes Banned microbeads and plastic cotton buds in its own-brand cosmetic products 	<ul style="list-style-type: none"> Keeps 95% of its store waste out of direct landfill
ALDI	<ul style="list-style-type: none"> Sources all its pulp-based packaging from certified forests Recycles 100% of its cardboard and plastic 	<ul style="list-style-type: none"> Not sent any waste directly to landfill since 2014
Marks and Spencer	<ul style="list-style-type: none"> More than 90% of all its UK packaging is recyclable, and less than 1% (by weight) of all its packaging can be traced back to polystyrene 	<ul style="list-style-type: none"> Reduced its total packaging by 25% and food packaging usage per item by 10%.
Waitrose	<ul style="list-style-type: none"> Reduced the thickness of its prepared salad bags and reduced smoked salmon packaging by 50% Charges 30p or 40p for its food to be delivered or collected in plastic bags Introduced a new sandwich wrapper, the plastic and cardboard of which can be more easily separated for recycling than other packaging 	<ul style="list-style-type: none"> Reduced 134m plastic bags, an equivalent of 500 tons per year

Under this initiative Amazon made a network with the local vendors, wherein goods are procured from the local vendors and delivered directly to the customers thus minimizing the usage of packaging plastics and minimizing the packaging and logistics cost.

CLICK AND COLLECT

The departmental store, John Lewis & partners, introduced a new concept of saving on plastics. A

number of retail outlets and major shopping websites now provide the option of ordering products online and then collecting them from the local shops directly at the customer's own convenience. Besides facilitating comfort to the customers, this strategy was aimed to save the costs involved in transfer of products and packaging wastes.

McDonald's

Maharashtra's ban on plastic is reinforced by McDonald's restaurants throughout West and South

India as the biggest burger franchise in India has switched from plastic straws, cups and cutlery to wooden cutlery and paper straws. The announcement came on the eve of Maharashtra's plastic ban by hard castle Restaurants Private Limited. Hard castle Restaurant Pvt. Ltd. is the parent company of McDonald's fast food franchise.

According to McDonald's, with the move to biodegradable and non-plastic alternatives, they will be able to reduce about 200 tons of plastic per year from Maharashtra and Karnataka alone.

To support eco-friendly measures, McDonald's will now provide its customers with wooden cutlery instead of plastic. This will include spoons, stirrers, knives and forks. Moreover, plastic cups are now replaced by superior quality paper cups at the outlets which would be made by biodegradable materials derived from corn starch and similar materials.

Table 2. Annual cost of Straws of McDonald's

McDonald's	
McDonald's Straw usage per year	36 billion
Average cost of a plastic straw	INR 0.35
Annual cost incurred for plastic straws	INR 12.6 billion
Average cost of a paper straw	INR 1.75
Annual cost incurred for paper straws	INR 63 billion
Additional cost incurred annually after replacement	INR 50.4 billion

The franchise official said that the company is working on alternative solutions for its delivery segment that can ensure safe and fresh food is delivered without spillage.

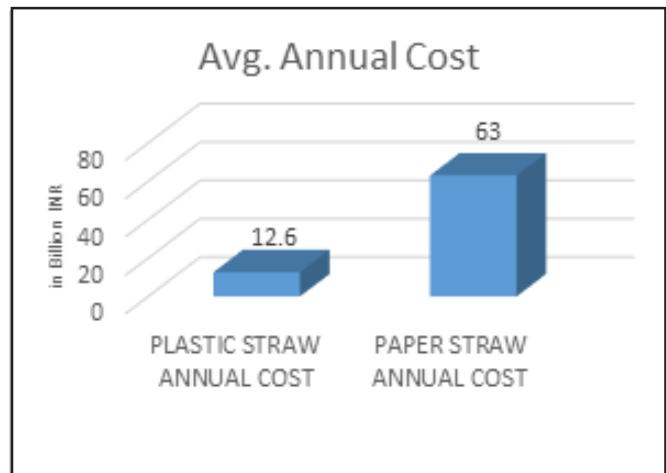


Figure 3. Price comparison between straws used in McDonald's

Initially McDonald's started providing paper straws. Owing to certain quality and cost issues it had to scrap the plan and it has currently gone completely straw less.

HOW REUSABLE BAGS CAN BENEFIT BUSINESS

Reusable shopping bags are designed to be durable and last for several years. Ultimately, it depends on how the bag is cared for and how often it is used, but reusable bags can last for six years. Purchasing a large quantity of bags secures a low price per item, so it can be very cost-effective to stock up. Marketing a brand with reusable bags is an investment that will make the most of marketing budget and pay off for a long time.

Earlier Retailers had to provide plastic carry bags free of cost for which they had to spend a part their profit buying those plastic bags. Reusable bags on the other hand are charged to the customer and the retailer does not bear its burden. On top of that, Reusable bags are like a sign, which customers can carry to get the word out about the brand.

Alternate to plastic bags:

Restauranteurs are increasingly opting for bags and cutlery made of corn starch to meet their take-away and delivery orders in the wake of plastic ban imposed by the government. Corn starch bags look and feel just like the ones made of plastic. Most restaurants are going for these bags even as they are comparatively expensive. Soberpreet Meher of Satguru Market Makers, a wholesaler, stated that they have been getting a lot of enquiries for cutlery and bag of cornstarch or paper straws but they are yet to reflect in sales. He also mentioned there were only five to six orders of these products.

The New Variety: Corn Starch Bags

- (a) Cornstarch is sourced from third grade crops that are not considered suitable for eating.
- (b) Biodegradable & compostable cornstarch bags are made from renewable plant resource.
- (c) These bags have a 6-month shelf life and should be stored out of direct sunlight.
- (d) If disposed off properly, the bags break down into CO₂ and water within a few months.
- (e) 65% less energy is needed to produce corn-based plastic than a conventional plastic.

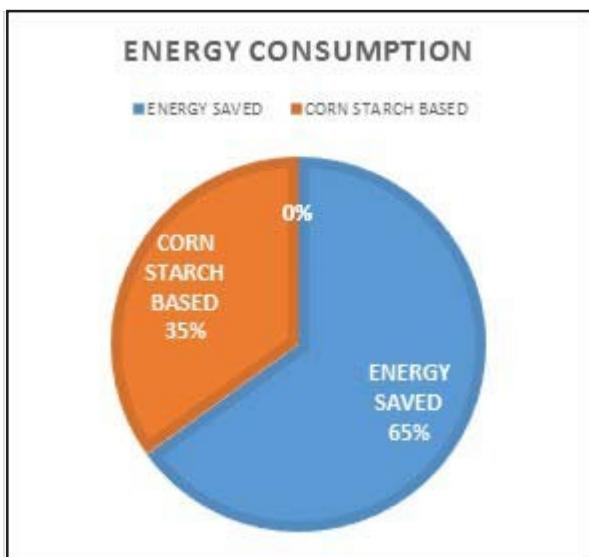


Figure 4. Energy Saved, Cornstarch Bag Production

Thakkar Industries owner quoted that the demand for the corn starch bags was high in restaurants. Since their main business was plastic, against the plastic ban. It had distributed samples of the corn starch bags free of cost to a few restaurants, but are not actively selling those. A factor that is behind the huge demand is the deficiency of corn starch bag. It had the raw materials to produce 25000 units while the demand was for 100000 units. This indicates that they could supply only 1/4th of the demand. He said that there will be a reduction in manufacturing prices once the product gains popularity.

ECONOMIC EXTERNALITY OBSERVED IN RESEARCH

Externalities are defined as the positive or negative consequences of economic activities on unrelated third parties. There are different types of externalities. The definition suggests that they can be either positive or negative. The externality scenario in this case is Positive. The impact of plastic ban was observed on other sectors but as the case of positive externality the companies producing Biodegradable alternatives of plastic bag observed a wide rise in their market presence and profits. Opportunities available to other companies were studied with the help of caste study of **Envigreen Biotech India Pvt. Ltd.** as part of our research.

Envigreen Biotech India Private Ltd.

Envigreen Biotech India Private Ltd produces India's first 100% biodegradable substitute to plastics. The idea of creating these products took shape in 2012 with the support of scientists and environmentalists across the world. Envigreen's products are made from natural starch, vegetable oil derivatives and vegetable waste. These products are non-toxic to the environment, animals and plants and contain no conventional plastics at all. Envigreen

products have an electric dissipative feature (suitable for electronic wrapping) along with anti-static feature-dust repellent, oxygen barrier-corrosion prevention, oil/grease resistance. It dissolves in hot water (80 degree Celsius) and softens in water at room temperature

Table 3: Data acquired by telephonic interview from Ms. Nidhi, Contact person, Envigreen Biotech India Pvt. Ltd.

ENVIGREEN BIOTECH INDIA PVT. LTD.	
Particulars	Data
Production per month	200 tons
Annual Production	2400 tons
Estimated Bio-degradable plastic industry growth by 2020	8,84,000 tons
Price per kg for Bio-degradable carry bag	Rs.285 + GST 18%
Captured market in competition of plastic bags	10 - 15%
Forecasted reach of captured market by 2020	25 - 30%

CONCLUSION

In this paper, we analyzed the ways countries and businesses are showing agility by reducing the plastic use wherever possible and most of the times completely substituting plastics with a greener alternative. The discussed alternatives to single use plastics implemented by the industries have the advantage of being more efficient for production while also being safer and sustainable from the point of view of the environment. This not only helps to reduce the costs incurred by the companies but also to safeguard the future of all living beings by reducing environmental damage. The bans all over the world as well as in India have hit the plastic industry hard. Plastic, playing a pivotal role in our life, cannot be easily replaced. The phasing out of plastic over a period is a more sensible approach than a blanket ban on it. Currently the alternatives available for it are still in developmental stages or are too costly to be feasible for regular usage. The temporary solution to polythene is use of paper in the sectors such as packaging, retail, logistics and food, etc.

However, as per our study is a very costly alternative and also not as durable as plastic. The longevity of paper is very low and the number of times it can be reused is significantly less comparatively. Also the use of paper at a time when mankind is already making efforts to save the forested area is not a good approach towards replacing plastic. The efforts of new organization and startups that are coming up now like Envigreen and Banyan Nation, whose ideas is to replace plastic with plastic but in an environmental friendly manner through the use of biodegradable substances is the way forward towards coping up and coming out successfully against the phasing out of polythene based plastics. These green substitutes are the market share and capital of these products has been increasing significantly over the last half a decade.

With the intervention of governments and awareness by local bodies, an impetus to these can solve two problems with one single strike, that of plastic waste and deforestation. In addition, corporates giants and retailers coming up with innovative ways

to reduce or totally eliminate the usage of plastics for production or for packaging is the right way forward.

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Business Agility: Big Data Analytics and Supply Chain

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Problem Statement

Are Indian companies ready to develop agility for the Big data analysis?

Abstract

Agile supply chain is no more an option but, a need of the hour for any company to function smoothly in today's volatile world. It is the solution to various problems faced in supply chain management networks and to maximize the responsiveness of a supply chain in an agile ecosystem. Today, SC vies on several strategies, of which agile strategy is the most commonly used, as it anticipates demand uncertainties. In the present era this strategy became the mostly preferred one. It focuses on inventory management. By using this strategy, surplus inventory and potential shortages are removed. As we talk of the present era, there have been various types of software established in the market for managing inventory. Having an agile supply chain enables you to attain precise and real-time demand. In simpler words it means how quickly one responds to demand in the market and thus satisfy the customer, that makes them superlative, i.e. the reaction time. The chain will be robust if we use planning-based applications which will support the operating teams for accurate decision making. This paper investigates the implementation of Big data analysis in SCM based on a case study conducted on a cable manufacturing company which is one of the oldest and largest, fully integrated cable manufactures in India with a rich experience of over 5 decades. This paper explains how big data analysis along with supply chain integration helps in evolving an analytic capability efficiently to minimize the task uncertainties in SCM processes and eventually attain supply chain agility.

Keywords: Supply chain management, Supply Chain Agility, Big Data Analysis

1. INTRODUCTION

Business Agility- Forrester analyst Craig Le Clair defines business agility as , "The quality that allows an enterprise to embrace market and operational changes as a matter of routine. This is the

attribute that enables companies to thrive amidst uncertainty".

Agility in Supply Chain- The perception of agility from business perspective means "readiness to change". It is defined as a strategy which is de-

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mand driven making it more approachable especially in a volatile market. SCM have been gradually changing because of the buying patterns of consumers, which have been perceived to be changing frequently. The prime elements of agile SC are Speed, Cost and Efficiency. They rely on the unpredictability of consumers demand.

Listed below are the four major elements on which the agile supply chain framework works:

Virtual Integration: Here, the information is gathered based on real-time market demand and further shared among concerned departments. Once gathered, this information is then used to cater the demand by collective forecast amongst the various subdivisions. Every subdivision responds concurring to their ability of fulfilling the demand. Virtual integration results in transparency, which makes it easier to detect the bottlenecks in the network.

Process Alignment: Main concern here is the Co-managed inventory. Nowadays the best solution is VMI (vendor managed inventory) through which most of the SC are managed. The processes are aligned with the strategies, goals and resources of the organization to attain optimum efficiency and an agile supply chain.

Network Based: Network based means the team work plays a vital role here i.e., each individual in the chain should contribute making it efficient. This reduces the load on an individual as the job gets alienated between all operators as per their core proficiencies. All individual operators in the chain are thus the drivers of the SC, and consequently, they equivalently own the chain. The performance level of all operators from each area matters.

Market Sensitive: These days demand is evaluated from the market which means, the SC are

market sensitive. Demand forecasting is based on the daily Point of Sale, where it is evaluated on a real time basis. Hence, timely response from market is considered for future demand forecasting. One of the best practices would be to pay attention to your customer. Consumer's feedback plays an important role in success of a SC thus, it is the actual demand driving the SC.

2. LITERATURE REVIEW

Selecting an active method to Supply Chain Management

In today's digital revolution era, a suitable solution to address the complexities faced in the supply chain could be data driven analytics. SC Analytics can benefit in expansion of real-time demand forecasting by collective precision, augmenting the inventory stages, safety stock, guaranteeing improved inventory management, supporting strategic decisions through network optimization and simulation, also refining the procurement process. Customers should be well-trained for performing efficiently and optimizing the SC.

Following are some extents that can be studied to achieve agility in SC.

Rameshwar Dubey, (Montpellier Business School, Montpellier, France), 2018

Big Data Analytics- As per their survey, after factually testing their theoretical model, the outcome recognized evidence (to surpass anecdotal evidence) that the organizations do certainly profit from big data analytics competencies to sense market variations, including demands, and product inventories. Furthermore, their results strengthen the perception that managers who can achieve the innovative technology in challenges to build competence at

supply chain level can expect their organizations to get competitive edge over their competitors (Davenport, 2006; Akter et al. 2016; Srinivasan and Swink, 2017). Though, before structuring big data analytics competencies, a thorough understanding of organizational flexibility is important. Organizational flexibility stems from acquaintance and capabilities to change organizational frameworks and resource provisions effectively and efficiently. The results suggest that organizational flexibility serves as a harmonizing capability to BDA competence in reliably refining SC agility in highly volatile situations. Even though research offers suggestion to show management practitioners that big data analytics competence does indeed pay off, they require a better understanding of how it can be developed. This issue is of prime importance, as big data analytics competence needs a substantial investment of resources and effort. Hence, without suitable knowledge of the resources and the capabilities needed to build big data analytics competence, practitioners may not attain the anticipated result via big data analytics competence.

Proceedings of the 50th Hawaii International Conference on System Sciences / 2017

DSC Transformation – Digital transformation of supply networks is a significant matter for various industry sectors, but this apprehension is not collective across other industries. The objective of the study was to identify in what manner Business to business, Digital Supply Chain combination could work more efficiently. Once the study on business necessities and the present readiness of integration was conducted it was found that, there was a significant gap in them. The outcome highlighted that as intermediate Electronic Data Interchange operators including SWIFT operator. They have been operating and cooperating in this area, but services still lacked some essential features like time-stamp-

ing of transactions, monitoring and tracking of information flows and secure complete delivery of information.

Australasian Conference on Information Systems, Adelaide, South Australia, 2015

Business Intelligence- An agile SCM is difficult to attain considering the complexities associated with it. Thus, this paper explores the possibilities for use of Business intelligence in SCM processes for assisting managers in minimizing task uncertainty which will help them to make more informed decisions. This will eventually help in attaining SC agility. After evaluating the current literature, it was found that there are major areas which require more knowledge regarding how SC Agility is attained. As found in the studies recently, IT can be contributory in attaining SC Agility. Henceforth, a complete study is suggested concentrating on precise IT tools, all key workings and SCM processes of SC Agility.

Galin Zhelyazkov Design, Manufacture & Engineering Management; Strathclyde University Glasgow, 2013

Customer Communication- Zara familiarized agile supply chain (ASC) and became the third most fashion industry retailer in the world. It achieved that because of their ability to ship products within a week. Efficient production organization with a good steadiness between in house and outsourcing task centrals is one more advantage that minimized the lead times and increased the market share for Zara. At Zara, the entire organization is agile and functioning very well-organized. By means of speedy response Zara minimizes excess stocks holding in the SC. Conclusion of Zara's achievement is that numerous advantages such as enhanced customer satisfaction, augmented market opportu-

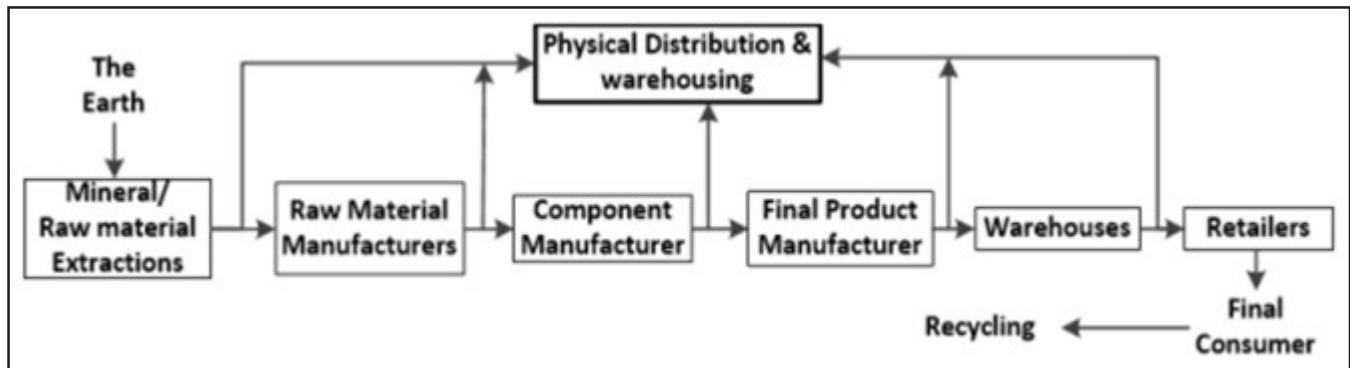
nity, reduced total costs and reduced overall risks can be instantaneously attained by means of speed.

3. SCM FRAMEWORK

This segment analyses two key extents of literature: SCM and big data analytics. It then represents literature that has conferred SC Agility and SCM, before stating the known information breaks.

3.1 Supply Chain Management:

SC is as a group of activities contributing in a system to eventually cater demands of market and demonstrates the SC cycle as shown in fig below. A typical SC activity involves procurement of raw materials, production of component using the RM i.e. WIP (work in progress) and finally transporting the finished good to the final consumer. The FG is stored in warehouses once component is ready after production. The entire supply chain is supported by Distribution and warehousing functions.



The above diagram demonstrates activities involved and the process flow of a typical supply chain. The aim of the managers should always be to make the SC more efficient and convert it into a value chain.

Though, the incorporation of big data analytics in the field of SCM is a recent experience. Following are major explanations why big data analytics is so crucial for the development of SC sector:

3.2 Big Data Analytics:

Supply Chain 4.0 – the next-generation digital supply chain

“Supply Chain 4.0 - the proposal of the Internet of Things, the convention of advanced robotics, and the application of advanced analytics of big data in supply chain management: place sensors in everything, generate networks everywhere, automate anything, and analyze everything to suggestively enhance performance and customer satisfaction” Big data analysis plays a substantial part in the SCM segment. The SC activities also advance as the present-day technology advances gradually.

Big data analytics has been evidently restructuring the shipping industry by enhancing the methods associated with manufacturing, distribution and delivery. This will help firms to grow efficiently and also to retain their clients.

- Big data analytics can benefit supply chain firms to develop agility skills and improve response rate.
- Use of BDA can benefit companies to remain up-to-date with the developments in SCM. Logistics experts use big data analytics for separating data and further sharing the essential information among teams.

4. RESEARCH METHODOLOGY

Selecting a suitable research method along with operative design is important for data collection to give appropriate outcome. This study is an experimental function wherein we wish to discuss diverse applications of Big Data Analytics in SCM key areas especially in a context of agile market. There are three types of research methodology: primary data analysis, survey or case study. A case study is carefully chosen as it is concerned with examining how Big Data Analytics could synchronize key SCM processes and estimate the actions Indian companies should take for integrating it. And

that requires detailed study of relevant events in a company. A case study was conducted on a cable manufacturing company which is one of the oldest and largest, fully integrated cable manufactures in India with a rich experience of over 5 decades.

5. RESEARCH FINDINGS

Big data resolves complications in various business domains, but the focus is on sales and operations. The study conducted by Forrester Research Inc. on How Forrester Clients are Using Big Data specified some of the key points about business domains where Big Data has greater impacts. This study results are shown in the figure below:

Big Data contribution to various business domain



As we can see from the data above, the potential of big data is not restricted to manufacturing companies but also advancing amongst other business domains. Big data is contributing in various sectors and helping them succeed. Manufacturing sector comprises of several activities like demand forecasting, production, inventory management, supply chain operations etc. Henceforth, we have

chosen a cable manufacturing company as our primary data study.

6. RESEARCH RESULT

It is crucial for Organizations to make sense out of lot of data existing with them. So Big Data Analytics can offer you the accurate perspectives for decision

making using algorithms, tools, technologies and internet of things. Big Data analytics could be used across the value chain in planning, purchase, manufacturing and distribution, and logistics to enhance the SCM. It can in fact help integrate these verticals and help improve efficiencies across the value chain. The company has implemented SAP and stabilizing that. Next step will be BDA.

Following are the companies views on Big Data Analytics in Supply Chain Management:

Big data analytics in manufacturing process:

The technology is creating measurable enhancements in supply chain operations around the globe. Manufacturing logistics is a progressively complex process, and companies are integrating big data analysis to manage operations throughout their enterprises. Big data analysis helps in cycle time reduction, statistical analysis for process stability improvement, reducing WIP in system and thus improves overall productivity. It will be certainly used in future and with more artificial intelligence and digitalization, it will become a must in future. Measures Indian companies should take to be ready for Big data analytics:

We must have end to end transparency in processes to comprehend the inferences of each process/vertical on others. Training the workforce to learn capability building which is required to know how to process data and understand the analytics.

7. CONCLUSION AND FUTURE SCOPE

After exploring the scope of Big Data, we have come to the conclusion that attaining an agile SC is strenuous since the complexity's necessity in SCM. This paper discusses the possibilities for Big data analysis in SCM processes assisting managers

to provide statistical analysis for process stability improvement and decision making which ultimately results in an agile supply chain. Once the study on business necessities and the present readiness of integration was conducted it was found that, there was a significant gap in them. However, IT has been considered in a broad sense in this study. Perhaps, different IT components such as Big data analysis, BI, AI, Internet can have dissimilar effects on SC Agility. Also, the existing studies have covered limited characteristics of SCM processes and SC Agility.

Our case study analysis highlighted the execution of big data analysis in SCM and evaluated the various sectors which are advanced resulting in supply chain agility. Further the study listed out necessary measures for Indian companies to develop agility for the Big data analysis.

We hope that our suggested measures will help the upcoming generation to outspread their existing knowledge and achieve SC agility. We have also stated the importance of evolving an analytic capability to minimize task uncertainties in SCM processes and attaining supply chain agility as that is the need of the hour in this volatile world.

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BLOCKCHAIN 2.0- Future Implementation in Private Industries

* **Saurabh Awasti (PG-M) - 3**

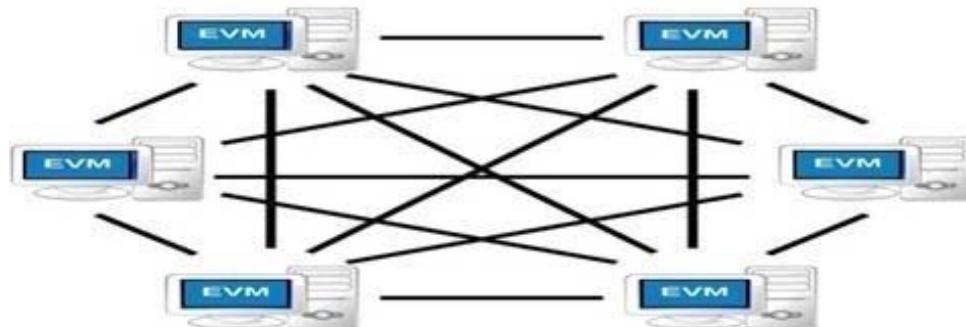
Rishab Rathi (PG-M) - 42

Sanket Joshi (PG-A) - 17

INTRODUCTION

Blockchain came into awareness while world was dealing with cryptocurrencies. Basically, Blockchain is a decentralized network, as the word suggest blockchain, it is chain of blocks where computers are connected together (As figure shown below) and organization can maintain its data on one net-

work and can get stored in a form of digital ledger. Basic, roots behind applying this is to get things secured and maintain transparency. This helps to maintain accountability and turn organisation into effectiveness and efficiency. A blockchain comprises of the database which keeps record of the history of transactions or data that has taken place.



Blockchain is fundamentally a database system with some differences. In a traditional database, the data is stored on a central server which is trusted to maintain the centralized database. Whereas in a Blockchain, the database is decentralized so that the burden of trust isn't upon one server, but instead on a network of systems. Such a model takes the help of numerous computers or nodes, each managing a copy of the same database.

Why Do we need Blockchain?

The simple answer is security. A distributed system is difficult to penetrate. For an intrusion attempt to be successful it'll have to be launched on all nodes simultaneously. Another beauty of blockchain is that this technology can be used to record or store any kind of information on a public audit or ledger system.

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EVOLUTION

When Satoshi Nakamoto, whose true identity is still unknown, released the whitepaper Bitcoin: A Peer to Peer Electronic Cash System in 2008 that described a “purely peer-to-peer version of electronic cash” known as Bitcoin, blockchain technology made its public debut. Blockchain, the technology that runs Bitcoin, has developed over the last decade into one of today’s biggest ground-breaking technologies with potential to impact every industry from financial to manufacturing to educational institutions. Here’s a brief history of blockchain technology:

Bitcoin Beginnings

You can’t discuss the history of blockchain technology without first starting with a discussion about Bitcoin. Shortly after some time, Bitcoin was offered up to the open source community in 2009. Even today, there are many who believe Bitcoin and blockchain are one and the same, even though they are not. Those who started to realize around 2014 that blockchain could be used for more than cryptocurrency started to invest in and explore how blockchain could alter many different kinds of operations. At its core, blockchain is an open, decentralized ledger that records transactions between two parties in a permanent way without needing third-party authentication. This creates an extremely efficient process and one people predict will dramatically reduce the cost of transactions. When entrepreneurs understood the power of blockchain, there was a surge of investment and discovery to see how blockchain could impact supply chains, healthcare, insurance, transportation, contract management and more.

REGULATORY REQUIREMENT

Jurisdiction

Blockchain has the ability to cross jurisdictional

boundaries as the nodes on a blockchain can be located anywhere in the world. This can pose a number of complex jurisdictional issues which require careful consideration in relation to the relevant contractual relationships. At its simplest level, every transaction could potentially fall under the jurisdiction(s) of the location of each and every node in the network. Clearly, this could result in the blockchain needing to be compliant with an unwieldy number of legal and regulatory regimes. In the event a fraudulent or erroneous transaction is made, pinpointing its location within the blockchain could be challenging.

Intellectual property

There is inevitably value in the blockchain, and ownership of the IP in it will likely form an important consideration albeit that the limitations on the patentability of software and business processes (in the UK at least will erode some of the relevant issues). However, given the amount of investment and the potential financial returns of blockchain technology, blockchain vendors will have to determine their IP strategy: vendors will likely want to capitalize on any other commercial benefits to be generated from the Blockchain, including commercialization of the underlying data set. To the extent the data set relates to the users, this is likely to be a carefully negotiated area.

Data privacy

As one of the key USPs of the blockchain is that once data is stored it cannot be altered (at least, not easily), this clearly has implications for data privacy, particularly where the relevant data is personal data or metadata sufficient to reveal someone’s personal details. Equally the unique transparency of transactions on the blockchain is not easily compatible with the privacy needs of the banking sector: the use of crypto-addresses for identity is problematic as no bank likes providing its competitors

with precise information about its transactions and the banking secrecy must be kept by law. In order to prevent this becoming a barrier to take-up, technology-based solutions will need to be found to design privacy-protecting blockchain. This might include limiting who can join the blockchain net-

work to “trusted” nodes and encrypting the data on the blockchain, although this is not without its challenges, and it remains to be seen how vendors, particularly those targeting the financial services industry, tackle the balance of privacy versus transparency.

WORKING MECHANISM OF BLOCKCHAIN

Blockchain works on 3 major components:

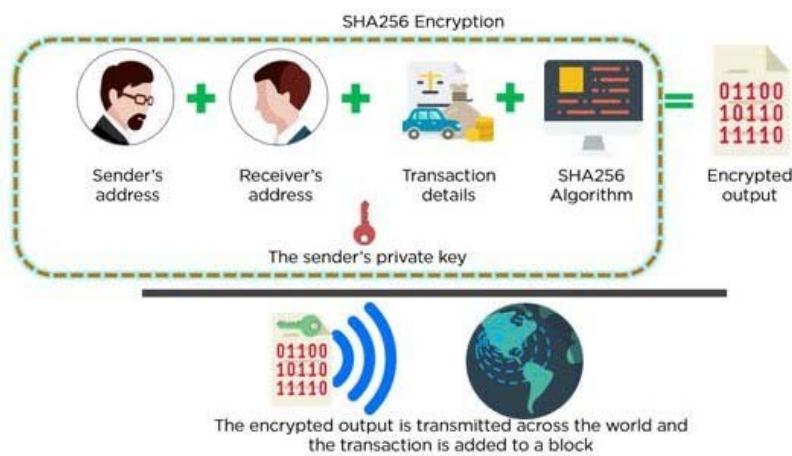
1) Public distributed ledger:



The blockchain is accessible to everyone who's part of the network. The users can even access the transaction details from the time the blockchain was created. The users however don't get access to the identities of the people involved in the transactions. The transaction details added to the blockchain are permanent, and cannot be altered.

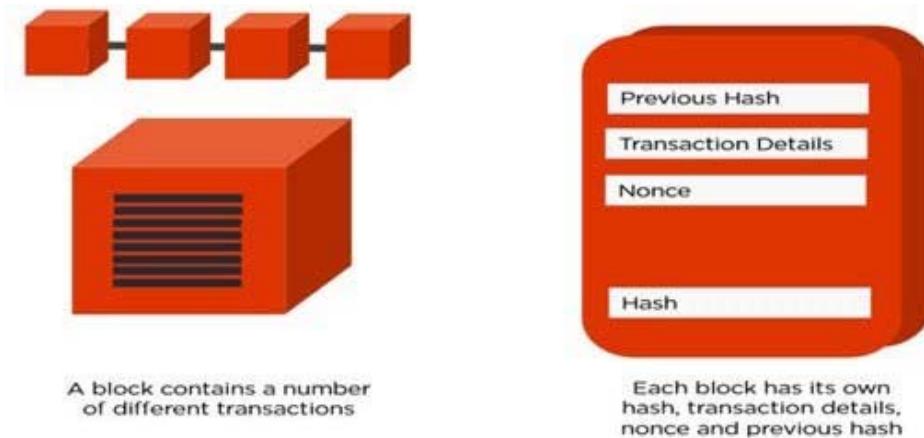
There's no central authority like a bank that controls the blockchain. This prevents any data alteration that can take effect by hacking this central authority. The users in the network ensure that no alteration to the block can stay permanent, as each user has a copy of the blockchain. The block can hold transaction details not only regarding money but also real estate and vehicles.

2) Hash Encryption:



3) Proof of Work:

Every block in a blockchain has 4 major headers



Previous Hash: The hash address that can uniquely identify the preceding block.

Transaction Details: The details on various transactions that are to take place.

Nonce: The random value that is used to variate the value of the hash address of the block

Hash Address of the Block: The values of previous hash, transaction details and nonce are passed through a hashing algorithm. The output obtained, which is a 256-bit, 64-character long value is the hash address that is used to uniquely identify the block. This output is the hash of the block.



Proof of work involves several miners around the world using computational algorithms to try and find the nonce value that satisfies certain predefined conditions regarding the hash value

Blockchain uses the SHA256 algorithm to secure its data.

The sender's address (his/her public key), the receiver's address, the details of the transaction and his/her private key are passed through the SHA256 algorithm. The encrypted output obtained then is transmitted across the world. After it is verified, it is added to the blockchain. The SHA256 algorithm makes hacking the data near impossible, and makes

the verification of the sender's and receiver's authenticity very easy.

INDUSTRIES WHO ADOPTED BLOCKCHAIN

Banking

Banking sector where the use of Blockchain is

widely being promoted and funded is banking. Banks already have massive databases. Once they move to blockchain, banks will be able to process payments faster and more accurately. According to a report by Accenture, investment banks will be able to cut \$8 – \$12 billion a year by 2025 by introducing Blockchain technology in their infrastructure.

ICICI Bank was the first bank in the country to execute a transaction. They exchanged, authenticated remittance messages and original international trade documents.

Music distribution

The challenges faced by the music industry are the inefficiency tracking music ownership and payments worldwide. Due to the lacking process of ownership and rights, it becomes difficult to manage the distribution of payments to everyone concerned with the project – a process taking years at times. By creating a new Blockchain codec, the content will be added along with the information to the Blockchain ready to be broadcasted.

Every time a new song is created by artists or record labels, it will be encoded with a Blockchain codec and pushed onto the global database. After, the digital service providers could tap into the codecs to make it accessible to their subscribers.

Social media

Even though social networks like Facebook, Reddit and Twitter are free to use, you already spend a lot of time on them scrolling endlessly through your feeds. What if you could get paid to visit and contribute to a social network?

Steemit is one such network that's trying to incentivize users for participating in their social media platform. The service works on blockchain

so everything is transparent where the user's Steemit wallet can be viewed by anyone. You can earn Steem Power (SP) in the platform by garnering up votes in your posts while up voting also earns you curation rewards. Currently, there are over 70,000 users registered and on signing up, you'll receive \$4 to get you started. Existing social networks are dependent on user-generated content which is used by the company to earn money through advertising while you're given only the services on the platform. On Steemit, you have the opportunity to actually make money by contributing posts and blogging excellent content.

Ridesharing

One of the problems faced by any Uber-like service is government intervention to protect the interests of existing cabs. By introducing a ridesharing service independent of any central authority, no government will be able to exert control over them. This can be possible by implementing the service over blockchain.

La'Zooz has already established a ridesharing model based on blockchain. The advantage of a decentralised ridesharing system is the release of control over the distribution of funds. Community members participating will collectively decide the rules on contribution and how the rewards will be circulated.

CHALLENGES

Performance challenges

Blockchain databases grow rapidly in size as new transactions are written, and there is a concern that the size of database required, and the consequent speed of access, may make it unsuitable for certain forms of transactions where speed is of the essence. In this regard, the scalability and resilience of a blockchain solution is clearly of the utmost

criticality, where the service is used as part of a financial institution's ability to fulfil trading obligations, customer interactions or regulatory requirements.

Early adoption

At the moment, many blockchain solutions are in a development or low adoption phase and, as a consequence, the technology and policies offered are relatively untrusted. Many organisations will therefore be uncertain of using services in relation to business critical activities without a high degree of confidence in the quality and stability of services. It will receive a need to be prepared to provide a level of protection to customers via not just the solution but the contractual terms themselves. In this regard, we suspect that, in the same way that cloud providers have had to, Vendors will need to make concessions to accommodate regulated customers. The extent of such movement will depend, as ever, on finding an appropriate balance of risk for the parties. Given blockchain in its purest form is predicated on multiple users contributing to the chain, so the on-going success and viability of blockchain as a market initiative will depend on the confidence placed in it by the various market users.

High fees and mempool issues need to be addressed

The blockchain is essentially a decentralized database, where each addition or transaction is verified by 'miners' – software that use complex equations to update the global database. Every time an item or transaction is added to the blockchain, it becomes longer. This in turn increases the time and power required by miners to verify each new transaction. Basically, unless something changes, the more popular blockchain is, the slower and more expensive it is to use. This has led to the mempool; transactions that are waiting to be verified by the

mining process, which are in effect a big performance bottleneck.

IMPACT OF BLOCKCHAIN

A. Increased Capacity

The most remarkable thing about this Blockchain technology is that it increases the capacity of the whole network due to large numbers of computers working together, which in total offers a great power than few of the devices where the things are centralized.

b. Better Security

Blockchain technology has a better security because there is not even a single chance of shutting down of the system. The reason is that the blockchain network is secured by a number of computers called nodes and these nodes confirm the transaction on this network.

c. Immutability

Any database that is centralized is subjected to get hacked and they require trust in the third party to keep the database secure. Blockchain like Bitcoin keeps its ledgers in a never-ending state of forwarding momentum, although we can change ledgers by Hard Fork it needs a general agreement amongst miners, exchange, and individual users, node operators. But still, there are high chances that the old ledgers would remain in their real form.

d. Faster Settlement

Traditional banking systems can be slow, as they require a lot of settlement time which usually takes days to proceed. This is one of the main reason why these banking institutes need to upgrade their banking systems. We can solve this problem by the means of Blockchain as it can settle money transfer at really fast speeds. This ultimately saves a lot of time and money from these institutions and pro-

vide convenience to the consumer also.

E. Decentralized System

Decentralized technology gives you the power to store your assets in a network which further access by the means of the internet, an asset can be anything like a contract, a document etc. Through this owner has a direct control over his account by the means of a key that is linked to his account which gives the owner a power to transfer his assets to anyone he wants.

F. Decentralization

In conventional centralized transaction systems, each transaction needs to be validated through the central trusted agency (e.g., the central bank), inevitably resulting to the cost and the performance bottlenecks at the central servers. Contrast to the centralized mode, third party is no longer needed in blockchain. Consensus algorithms in blockchain are used to maintain data consistency in distributed network.

G. Anonymity

Each user can interact with the blockchain with a generated address, which does not reveal the real identity of the user. Note that blockchain cannot guarantee the perfect privacy preservation due to the intrinsic constraint.

CONCLUSION

This following results is made based upon secondary research, since research more focuses on private companies and we have mentioned most of things about private company regarding the usefulness of this technology. Private firms have loads of resource as compared to public companies and they can install it depending upon the requirement and their pockets. Since presenting a scenario from perspective of private company. Now, dealing in

public sector and installing this technology would be like a game changer for our country, But India being a developed nation, rather than setting the trend, they like to be a follower. Though, it may have resource, installation will always take time, because public companies are humongous and to reach every part won't be easy, but mainly need to reach into roots. Instance, LPG,1991 was applied after we faced crisis, but in other countries it was applied long before. Another one, GST took around 17 Years to be implemented. Seeing the scenario things will take time but sooner or later will be installed, because Blockchain is the future and can curb amount enough of problems.

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This primary conclusion is that blockchain technology can originate tremendous ideas that how

we can change our day to day life, how to boost nation's economy and so on. we can form private public limited, this will be an advantage in terms of capital available with private and permission need to be sorted from government will be easy, collaboration can help us to get into some parts of roots. Instance, Farmers being backbone of our country, are transforming land records to blockchain.

In rural areas, each home may have solar system to generate electricity, if we consider these houses as blocks and join them, excess electricity can be transferred to needed one. through this crypto currency also can be introduced, people sitting in urban areas can donate power through such crypto currency. As money transfer will increase it will increase reduce time to make changes happen that is more development in less time. To find these future insights, more innovative research over blockchain ideas should happen. This research project is an attempt to find insight which will become a milestone in journey of blockchain technology in future.

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Banking and Finance: Ten Years after the 2007-2008 Financial Crisis

* Tejal Yelne

Mentor: Prof. Suhas Gharat

Abstract

During the great recession of the 21st Century, which has been the worst since the Great Depression of the 1930s, financial giants such as Lehman Brothers Holdings Inc., Washington Mutual, Inc. and others met their fates with insolvency. Some small financial institutions like Merrill Lynch & Co. had to merge with Bank of America, which is one of the 'Big Four' banks in the United States of America. In spite of the agitation which the banking and finance industry faced, some institutions could weather this crisis storm and are still progressing. In this work, we are analyzing how these survivors of the crisis were agile enough to sustain later on in the industry. The idea is to decipher how these institutions sustained by applying the knowledge and skills of risk management, mergers and acquisitions and up-to-date FinTech to their needs.

Keywords: Financial Crisis, Agility, Risk Management, Mergers and Acquisitions, Fintech.

1. INTRODUCTION

Deregulation in the financial industry was the chief cause of the 2008 financial crisis, authorising the banks to engage in hedge fund trading with derivatives. More mortgages were commanded by the banks to promote the profitable sale of these derivatives. The subprime borrowers could then easily afford these interest-only loans created by the banks. In 2004, as soon as the interest rates on these new mortgages changed, the Federal Reserve raised the fed funds rate. As supply increased faster than demand, housing prices started dropping. The

homeowners were trapped since they neither could furnish the payments nor could trade their residences. Banks ceased to give the loans to each other when the values of the derivatives disintegrated. This financial crisis was the cause that directed to the Great Recession [1]. Towards the end of 2008, each and every major economy of the world suffered the wrath of the recession. According to the World Bank year-end assessment report "Virtually no country, developing or industrial, has escaped the impact of the widening crisis". With an expected rise in global economic output of a meager 0.9 percent in 2009, it is the most luke-warm growth rate after 1970. [2]

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The survivors of the crisis, majorly the ‘Big Four’ banks of the USA and other top real estate corporations were withstanding with agility post the peak of the recession. These big fours of banks in the USA were categorized into two genera. JP Morgan and Wells Fargo sailed through unscratched during the crisis. Thanks to the mergers and acquisitions, both were notably tough since they turned out to be stronger after coming out of the crisis, in spite of the fact that they too had considerable concerns. On the other hand, Bank of America and Citigroup were among the many banks with balance sheets enduring the burden of assets that were precarious. But overall, after the crisis, Bank of America leads in self-improvisation among the big fours. [3] With work kindled due to technology and a multitude of economic and cultural trends radically changing every year swiftly, FinTech is expediting rapidly than ever before. [4]

2. METHODOLOGY

This extended abstract is a descriptive review of the findings by the published electronic news articles. The review is conducted based on secondary data only. Since the review covers the pieces of literature majorly related to the business agility in the banking and finance sector post-global economic crisis of 2008, most of the works of literature have been documented from news articles of established financial and banking themed news websites.

3. ANALYSIS FRAMEWORK

In this section, we would be examining the factors contributing to the business agility of the financial crisis survivors.

3.1 Mergers and Acquisitions

When it comes to mergers and acquisitions, it is the period when big competitors score in or weaken

their comparatively weaker competitors when economic conditions are feeble. The 2008 financial crisis was a perfect time for this.

The process of union assumes that a procuring company asks for the assets, liabilities and equities of the company they have procured in the form of cash exchange or shares. In return, acquisition assumes that the procuring bank consolidates all their operations inside the structure of a single new agreement by taking over possession over other banks. Though they are normally inclined to corporate control changes, the process of acquisition assumes that two or more banks may serve as autonomous legal entities. Eventually, one bank acquires management control over the other bank with the help of the takeover. A minimum of 25 percent of the voting power is acquired by one bank over another bank. Following the inimical effects of the global financial crisis, mergers and acquisitions have become an indispensable part of the banking sector. Numerous banks worldwide have involved themselves in mergers and acquisitions, eventually enabling them to profit from the possibilities of economies of scale, which could not have been possible had they operated themselves as autonomous financial structures. Mergers and acquisitions help banks to reduce their costs at considerable rates and expanding their operations. Moreover, This helps in the reduction of competitors by reducing the number of financial market players, thus reducing the banking industry competition. [5]

On the onset of the crisis, it was Countrywide Financial Corp to be the first among the ones which went under the radar, but later it was purchased by Bank of America for \$4 billion. The banks which primarily worked in the mortgage securities sector, Lehman Brothers and Merrill Lynch, had their share prices plummeted due to bids in the markets. For \$50 billion, Bank of America purchased Merrill

Lynch. On the other hand, Lehman Brothers was refused any subsidy from the government and it was a hard time for it to find any buyer. As soon as the Merrill sale took place, Lehman Brothers declared itself bankrupt. To avoid the same fate as Lehman Brothers, Morgan Stanley and Goldman Sachs, which were autonomous investment banks earlier, scaled themselves down to bank holding companies, post which they received credits of various kinds from the Federal Bank of the USA at the cost of putting itself under its regulatory radar.

A kind of rivalry as to who is better in uplifting the economy emerged between the Treasury and the Fed. The latter failed to unlock the credit markets by decreasing interests of short-term. The Federal fund rates hit its lowest with a range from 0 to 0.25 percent. These rates were used for overnight loans between the banks. With the help of government securities purchases, loan guarantees and basic loans, the Fed attempted to induce money in the economy. More than \$1 trillion was liquidated into the economy by the Fed indicating its willingness to bring a majority of the financial institutions out of the crisis muddle.

Take for example Bear Stearns, which highly specialised in mortgage-backed securities, had its value plummeted. Within 3 months with its approval from shareholders pending, Bear Stearns was considered for purchase by JP Morgan for a price of \$0.24 billion or \$2 per share. JP Morgan Chase agreed to guarantee all Bear Stearns trades and business process flows, in the intervening time. JP Morgan Chase and Federal Reserve concurred with buying it for \$1.2 billion and \$30 billion of Bear's declining assets respectively. [6] In spite of Washington Mutual being part of a huge scam for being in massive subprime losses and eventually leading it to be seized by Fed regulators, which was the worst bank failure in the history of the USA giving

it a tweak in the ceaseless credit crisis, JP Morgan Chase obtained its banking assets. The \$307 billion worth of assets, as well as deposits worth \$188 billion of Washington Mutual banking operations, was obtained entirely by JP Morgan Chase. [7] Ultimately, JP Morgan ended up proudly owning around 5,400 branches spread across 23 states, which was the result of the acquisitions.

32 Risk Management

When it comes to risks in finance, banks are the most prone that could cause an irreparable damage to the financial system and its business as a whole. It is thus indispensable for the banks to prepare a structured framework which would take into consideration all kinds of risks and a management system for the same which should be combined into all business enterprises rendering for the bank risk profile to be perpetually in sync with the accepted risk capacity. In their works banks are especially exposed to rather may possibly be exposed to the following risks: credit risk (including residual risk, liquidity risk, settlement/delivery risk, dilution risk, and counterparty risk), foreign exchange risk, interest rate risk and other market risks; concentration risk, particularly bearing risks of disclosure of the bank to one person or a group of associated persons, bank's investment risks, risks associating with the source country of the object to which a bank is imperiled (country risk); operational risk which basically includes legal risk, risk of acquiescence of operations of the banks, money laundering risk and terrorist financing; and risk in strategies. [8]

To avoid further mixture of toxic and non-core assets with the good ones, in the second quarter of 2009 post financial crisis, Citigroup applied one of its strategies of segregating the stable assets and steady operations as a separate subsidiary, named Citi Holdings. Citigroup's assets in Citi Holdings

has been diminished to just 3 percent of the former's balance sheet, which is worth \$54 billion. According to Citigroup's current CEO Michael Corbat, the system had been paying for 10 quarters in a series. The fourth quarter of 2016 was the last while when it had classified its results from its Citi Holding subsidiary. According to former-CEO Vikram Pandit's explanation during that time, Citicorp is their core franchise and would be the root of Citi's long-term profitability and growth. Administering \$800 billion value of assets at its zenith and regarding its own, Citi Holding would make itself the fifth largest bank in the USA when it was formed up to today.

Bank of America, which countered to the crisis in a comparable way, inspired Citigroup's determination to create Citi Holdings. The North Carolina-based bank designed its Legacy Assets plus Servicing unit to acquire the likewise role as Citi Holdings not delayed after Citigroup's determination to bifurcate its services towards good and bad banks. [9]

Many of the ameliorations recognised in September 2009 at the G20 in Pittsburgh have focused on and driven essential reformation of the banking industry across the succeeding 10 years. Banks are now adequately capitalised, rightly managed, with added pre as well as post-trade clarity. Banks exchanging on own accounts have been considerably diminished, although station seeking to maintain liquidity and risk management still has a significant part to play. Commission levels and returns have been reconstructed more firmly for shareholder interests. There is additionally enormously more global managerial knowledge sharing as well as coordination. [10]

Employees receive training on their execution and

possibilities for advancement during the year. Banks have improved the training plus development they render not only for helping employees accomplish their own professional aims but for further helping them to be extra efficient at handling risk properly covering the end few years. In 2017, staffs of Bank of America incorporated more than 10.5 million of coaching hours, taking benefit of thousands of programs proposed during their employee training curriculum. The Courses traversed their business models, administrative affairs, and risk management. They also built notable intensifications to their business Risk Framework coaching in 2017, which was distributed to over 250,000 staffs and entrepreneurs, encouraging them to strengthen their knowledge of operating risk well and assure apprentices better recognise their part in managing risk. It is mandatory for all the staffs to perform yearly training on the Code of Conduct that describes business systems as well as professional and personal demeanour that is required for everyone to obey. The Code, which is instilled in their ethics and values, leads them to face their duties and be in charge of risk for consumers, shareholders, and one another.

33 Fintech

Funding for financial technology (Fintech) has increased exponentially over the earlier few years, and it's inspiring a flow of new devices and platforms that continue disrupting and improving the financial aspect.

The 2008 Global Financial Crisis is attributed in substantial portion with the swift rise in fintechs. Because of the 2008 meltdown, fintechs have reappeared to spring up from all rims of the earth. The deductions are supposed to be plenty:

1. Resentment at the instituted banking system including the chief entities that it constitutes of.

2. General lack of public confidence post-crisis on banks.
3. Following the crisis, banks ceased lending; businesses had to dispute with prohibitions on series of credits or bank loans plus people were turned down for providing mortgages and personal loans.
4. The internet is transforming our relationship with wealth the equivalent style it radically changed both the music and newspaper businesses. Fintechs have received the benefit of this and developed finance assistance based on the progression of the internet. People now utilise their smartphones or tablet computers to conduct financial matters. Fintechs have utilised the internet to render quicker, affordable services.
5. Banks opposed reform since it was more suitable and profitable to prepare so. They have acquired financial services for so long time having little to no competition whereby enabling them to credit great commissions, and often unknown or undisclosed fees, like exaggerated foreign exchange rate extents or report of credit costs. Fintechs have observed this and suggest an option, usually at lower rates and open pricing.
6. The global financial crisis nearly failed the global banking system. Following 2008 banks were preoccupied with restoration and a surge of a new statute with which to adhere, venture in the latest technology and in accommodating the dynamic financial aspect has not assumed to be a preference. For aforementioned inference, banks are now performing catch-up amidst fintech in the context of technology. Fintechs are establishing the benchmark soaring. This is one idea why banks throughout Europe continue terminating high street branches. Individuals are normally not banking in person at all (particularly generations X and Y) and banks have so far been ineffectual

to retain clients online whereas fintechs have, as their power prevails in online intercommunication. [11]

For liquidation, there are three chief inclinations inspiring the fate of Fintech:

1. Encouraging cost-savings and efficiency: According to an Association of Financial Professionals study, 82 percent of organizations view switching to electronic payments as a means to decrease costs, and 88 percent indicate electronic payments as a process of increasing efficiency. Nevertheless, 50 percent of B2B liquidation is still performed with paper cheques, and 60 percent of B2B liquidation need manual mediation at some time. One arising drift in Fintech is the improvisation of automated tools that can assist organizations to recognise cost maintenances and decrease labour-intensive, at times irrelevant payment processes. Some upcoming Fintech utilises SMS and emails to gain permissions for dispensing payment, that may lessen costs and utilises mobile devices for making image cheques and records, that could help in expediting the process and clearance.
2. Global expansion: A different drift in Fintech is discovering new methods to promote international operation and augmentation. Around 60 percent of the middle-market businesses have a ubiquity in the global marketplace out of which 70 percent require overseas sales to grow in the subsequent five years, according to the 2016 JPMorgan Chase Middle Market Business Leaders Survey. This yields increasing intricacy in cross-currency remuneration. Significant Fintech solutions approach this hurdle by assisting to determine and follow payments, render reporting in real-time and agreement, promote foreign exchange (Forex) automated clearing house (ACH) and deal with Forex risk.

3. Addressing cyber threats: The necessity to shield against scam and cyber perils arises with digital payments. Blockchain technology may contribute to an essential domain of investment fronting certain threats. Blockchain utilises guarded “blocks” of accounts which are time-stamped and connected within a scattered database. It can aid in checking deceitful activity meanwhile preparing a comprehensive ledger, and by sharing information over a network, it can diminish the risks which arise with maintaining information at a particular spot, where it could be aimed at more undeviatingly by hackers. Other significant innovations in cyber security cover regard and discharge technologies, payment genuineness, diagnostic tools and advanced warning systems for identifying possible warnings.

In spite of the reconstruction prolonging to obstruct the usual norms, the Fintech delivers new aptitudes which can aid organizations to enhance their operations and appreciate the associated savings and capabilities.

4. CONCLUSION

Since the failure of the banking system, many financial institutions have learnt lessons of decision making the harder way. In the past decade, the financial crisis survivors displayed their business agility by analysing what went wrong and pondering upon the solutions to emerge out of the disarray primarily with the help of mergers and acquisitions, risk analysis and the exponentially progressing financial technology. The business norms which they have created and maintained in the wake of the crisis has indeed made them stronger than before to face any unexpected, inevitable challenge. With the creation of Citi Holdings, Citigroup made sure that it keeps its bad loans quarantined. The effective utilisation of logistics, big data along with

Fintech by the ‘Big Four’ eased the loan application scrutiny procedures, eventually proving their business agility and leading them to stay a step ahead of others.

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BOOK REVIEW

The Portfolio Book of Great Indian Business Stories

(Riveting tales of business leaders and their times)

Copyright Penguin Books India 2015 | ISBN 9780143425243

*** Komal Patil**

Ever wondered what differentiates the one percent from the rest? Then this book takes you on a journey of the leaders you have always looked up to. A chance to experience what it was like, in their shoes, to deal with life's circumstances and still be able to carve their own mark. This book is a collection of tales of the lives of Indian businessmen, focusing on their periods of struggle and their qualities which distinguished them from the rest of the crowd. It talks about that one decision, one step in which they played their biggest gamble in the casino of business and emerged victorious. People give up after losing a few times, but professionals are the ones who stay long enough to learn from their losses and play until they convert it into a win! Like this review, it directly jumps to the content without wasting pages for preface and intentionally left blank pages! (The part that avid readers acknowledge but normal readers skip.)

We start by catching a glimpse of Rahul Bajaj, who followed his family ideals of incorporating the Gandhian philosophy of Trusteeship. Their friends turn foes, the feuds between Bajaj's and Firodia's escalated to gain control of Bajaj Auto and Bajaj Tempo. Winning one problem gave them a hope that further led to fruition of Bajaj Chetak being a huge success. But victory was short-lived as the partner (Piaggio) they worked with, filed a lawsuit against them for not returning their designs and decline their right to manufacture. This is the true test for a leader to fight for what is rightfully theirs and after winning the case and being crowned with higher sales, still competing with rivals. Apart from this, there were many political hurdles which they had to overcome. Talking of hurdles, reminds you of a man that dodged them well. His name is tainted in the present but looking back, there was something to learn from Vijay Mallya. Taking surveys of college kids by standing outside their gates showed his determination to improve and openness to change. All of this helped in the re-launch of Kingfisher brand. From cost cutting to positioning the brand well, the sales rose. The cherry on cake being the calendar with best female models in exotic locations. Also, the amount of planning that went into acquiring Shaw Wallace right from an NRI partner Manu Chabbria who ditched him at a crucial moment and handling this when the government rules were strict showed he never gave up on what he set his mind into.

When we mention ethics in business, “Tata” is the name that echoes in India. The scenario shows Ratan Tata tackling labor crisis at Telco (now Tata Motors) while simultaneously trying to strengthen his post at Tisco. This teaches us that not even a great organization like Tata’s was free from clashes in their senior management. It skips to the Auto Expo, 1998 as a memorable moment for an Indian car launch. It talks about the symbolism of car as a matter of pride and patriotism. Indica being manufactured completely in India had all the eyes set on the car, which led to booming sales. But before they could celebrate, complaints about service and product quality started flooding in, resulting in a crash in sales. It was their survival at stake. Any new businessman would have scrapped the idea and exited the industry. Except, he didn’t have an intention to give up. He trusted his engineers to overcome all the difficulties and in no time, they were back with the new Indica V2. Talking about survival, how much chance does a 21 percent share of Indian coastal traffic stand against the mighty 79 percent British India Steam Company (BI) stand? All this by a man who started as a railway contractor, only to be fascinated by the ship SS Loyalty in the end! Yes, it is the tale of Walchand Hirachand, who followed his heart and turned his dream into reality. He found Scindia at a time when bigger players like Tata had left the field. Not only did he have faith in his business but he also supported smaller companies along the way. It is an excellent example which teaches us that an individual success is good but uplifting everyone to sustainability is great.

The hardships in life often shapes the person to what they are now. Subroto Bagchi was such an individual that grew up the ladder as he started working in the textile mills. A beautiful analogy about how the seed under the rock learns to circumvent it and grow into a big tree which renders the rock insignificant taught him not to quit when things look hard. Later, he decided to start his own venture MindTree. Seeking for innovation led him to help the Spastic society Karnataka and pledge the social responsibility for mental health issues. Another personality was Dhirubhai Ambani who believed in structured planning and fast pace implementation. This highlighted a point that even though foreign partnerships seemed lucrative, it slowed down the process due to stalled decision making. It shows a higher level of awareness. He was also against discrimination as seen in Reliance when he asked Mukesh to recruit all new people in the company on merit.

After reading these chapters, it instills a sense of leadership and hard work while working for our dream. But do we have the patience like Jamsetji Tata to wait for 17 years for its fulfillment? And in that time, slowly work our way to that dream just like he did, by studying ores and their extraction processes before building an iron and steel plant. To top that, the cost for machine repair and salaries of workers were deducted from his personal wealth! He is also one of the pioneers for setting up institution for learning. As you continue learning, you look for a job vacancy. There is a tale of Mohan Singh Oberoi who secured himself a job at Cecil Hotel despite no vacancy. Not only did he say but he proved himself by actions, making the system efficient. Later, he didn’t even hesitate to swim in uncertainty along with his boss into a new venture. Now, there is an Oberoi hotel wherever you go!

A dream is what doesn't let you sleep. J.R.D. Tata was fascinated by airplanes and after getting his license, he flew the plane. He started the airmail service which was known for being at a steady pace even in times of trouble. This company saw the WW2 and still stood tall. Tata Airlines of that time is what we call Air India today! Facing the storm, was the story of Xerxes Desai who founded Tanishq at a time the country was low on Forex reserves. Corporatization in a field dominated by family jewelers was a long shot. But the miracle of Karat-meter proving the authenticity of gold, had people standing in queues. Also, films helped them gain them the Indian woman's trust and this is how a failing business was turned around because people never stopped working for it. However, there is a case of Bhai Mohan Singh bought Ranbaxy and by understanding the process of making a life-saving drug by reverse engineering, set up his own R&D plant. The flip side being, he didn't give due credit to the intellectual property of the scientists. In the end, the company was sold to the Japanese. This is an ugly side to business that people don't talk about. It creates rifts between families and leads to destruction instead of prosperity. It was definitely an eye opener when it came to relationships and business. On the other hand, we have people like Aditya Birla who successfully expanded their family business and also became producers of staple fiber (viscose) and palm oil. Not only in India but he managed to expand the company overseas too and succeeded. Yet the people in Bombay Gymkhana knew him as a good badminton player than a big industrialist, which spoke volumes about his humble nature. Similarly, we have S. Ramadorai, who became a part of Tata and worked to bring the latest computer technology to TCS despite government restrictions. It was a tedious task to keep screening the changes in laws and tax regulations just to buy a mainframe computer. They managed it even when the Government announced that Forex reserves were restricted for Defense. We can see that it is always innovation that drives change and continuous changes keeps the company functioning smoothly.

This book contains selected excerpts from multiple sources and gives an account of the challenges faced by the business leaders and their story of determination, perseverance and patience when combined together, translates as the formula for success. The learnings have been covered a little in the summary above but they also act as guidelines for a normal person. Any person that wants to excel in their craft. The qualities portrayed by leaders are similar everywhere. The power of choice is a gift to the individual. Whether we accept our own truth or rely on the opinion of others, shapes our destiny. It has been a journey where strangers were helpful, good friends became enemies, cases of mistrust and conning, rifts in families and having unexpected luck in situations. This book is an example that ups and down in life are inevitable. The only difference is how one chooses to deal with it.

Since it is a collection of stories, it is shorter. But at the cost of a tale with a missing head or tail. It has several occasions of time skips and entry of new characters which have not been mentioned about in all the chapters. It becomes very difficult for a reader to have known the people who played a crucial role in the story. The stories are based during British Era which can be confusing to people who aren't familiar with the laws and restrictions in that time. If a reader is used to reading complete stories, this may be a bit hard to endure as it takes time for the scenario to seep in and as one reaches the crux the story ends abruptly.

Nevertheless, it is a good read for a beginner if we keep aside the technicalities or if one is fond of reading, the internet is always to the rescue. If some tale is fascinating enough, one can read the full version from the mentioned source of extraction in the beginning of every chapter. The good part is that the short stories are motivating people in times they lose hope and teach them that it is often the unfavorable circumstance, which is the real test of an aspiring business leader. A leader was never born. All of them worked their way through life and refined their skillset. The only difference was they chose to stand the ground when everyone gave up. This is an excellent message to the aspiring youth, who have shown a steady streak of instant gratification that has cost them many golden opportunities.

The cover of the book is in blue that reflects positive vibes just as the inspiration from the collection of stories has a positive change in our life. This book has achieved its purpose which is to give them a sneak peek into the life of business leaders and make the readers aware about the personality, a store for secrets that only the people on the inside know, excitement about what happens next and present them with a glimmering ray of hope. A hope that they are not alone in facing troubles which spin out of control and that, they have the strength to be the captain of their own life and sail themselves through the storms to become successful in their work. It ends by giving the copyright acknowledgements that has a list of all the books or speeches the story was taken from. It acts as a further list to be explored by the reader, thus, making them wishful for more knowledge. Happy Reading!

The editors invite original unpublished empirical and theoretical papers, case studies and scholarly articles consistent with the scope of the journal.

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