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Edited Book

Mass to Masses : A Road Map to 5 Trillion Economy & Beyond

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Edited Book
On

Mass to Masses: A Roadmap to 5 Trillion Economy & Beyond

EDITORIAL BOARD

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Preface

I am glad and content to see the releasing of the Edited Book titled "Mass to Masses: A Road Map to 5 Trillion Economy and Beyond" during Intaglio Series 2020, as conceived few months back. I consider this essential and useful that the Institute mobilizes original thought processes across industry-academia on important national/international issues concerning business, society and economics. This is also highly desirable because AIMS is actively engaged in diverse activities relating to research, education, skill development and industry interface. Our Research Cell has rightfully felt it necessary to encourage the thought processes concerning ongoing discourse on India envisaging the goal of being $ 5 trillion economy by 2025, and publish them in the for of an Edited Book.

The optimism of government of India on its medium-term macro growth target of US$5 trillion by the end of 2024–25 is indeed heartening. Currently, it sits at US$2.3 trillion. The Economic Survey 2018–19 has estimated that India needs to grow at 8 per cent per annum in real terms — 12 per cent in nominal terms with 4 per cent inflation — as per the Reserve Bank of India's (RBI) Flexible Inflation Targeting framework. This must be accompanied by a 0.7 per cent increase in total factor productivity. India has experienced such growth figures in the past, but recent trends pose risks to achieving the target.

One may note that the current slowdown is structural as well as cyclical. It also appears to be caused by both demand and supply-side factors. While the cyclical slowdown appears to be largely caused by both domestic and global factors, the structural slowdown appears to be a product of domestic factors. There is a need for policy measures that ensure economic revival both in the short-term to address cyclical slowdown, as well as in the medium-term to address structural slowdown.

I thank all the authors who honored our call for research articles, case studies, opinions, etc., on various dimensions of the current narrative of Indian Economy and its growth. The book offers an interesting reading for the students of Business, Commerce, and Economics as well as all those who wish to form informed opinions on our current pursuit of 5 trillion economy and beyond.

With Warm Regards

Dr. M. A. Lahori
Director, AIMS

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1. Apply Economics Basics to 'Grow' Really, I mean it…

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Overview: One of the vacation days, author had a bitter talk with his noble better half on family growth and grooming. This led to a desire to pen down a thought as to how a volatile situation whether be of a business or a family can be handled by young budding generation?

As a relaxation skill author by stretching legs, hand-up sitting on his arm-chair in his tiny home-Eden Villa-garden looking on the primary school pupils passing by (a school adjunct to his villa), a thought came to his mind about 'the application of Basics of Economics' in one's life and business for growth and grooming. While shuffling the 'Coffee Table Book' he was served with nicely brewed coffee by his better half, of course with smile and fresh look! Author finishes his last sip of the coffee coupled with concluding cigar-puff from his chillum, giving additional freshness to himself, the mind delved into two off-shoots of growth viz.,

- Family growth and grooming
- Business growth and learning

The growth, grooming and learning are purely based on the application of 'Basics of Economics' in two different situations either in family or business house, as to keep growing, grooming and learning respectively. The situations would be;

Situation 1: Application of *'Basics of Economics'* in growth and grooming family or business.

Situation 2: Complacent on the *'Basics of Economics'* in growth and grooming family or business.

Then the thoughts started vigorous churning while the hand slowly un-cluttering book shelves, almost concurrently the eyes browsing and surfing on his system.

Keystone: The father of Economics and philosopher Adam Smith in 1776 has defined, the economics as, "an inquiry into the nature and causes of the wealth of the nations,". Thus, he construed that, economics is a science with two fold objectives, providing a plentiful revenue or subsistence to the people and to supply the state or commonwealth with revenue for the public services.

Alfred Marshall provides a still widely cited definition in his textbook *Principles*

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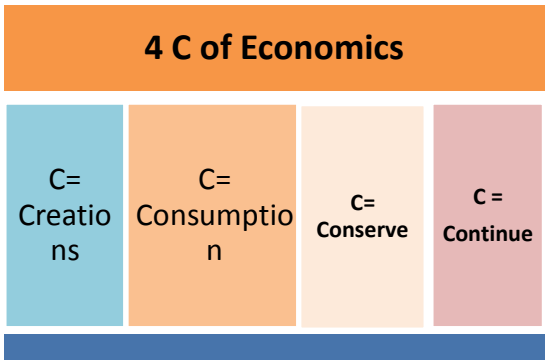
of Economics (1890) that extends analysis beyond wealth and the societal to the microeconomic level, creating a certain synthesis of the views of those still more sympathetic with the classical political economy (with social wealth focus) and those early adopters of the views expressed in the Marginal Revolution (with individual needs focus). Marshall's inclusion of the expression wellbeing was also very significant to the discussion on the nature of economics. Hence, Economics is a study of *mankind in the ordinary business of life;* it examines that part of individual and social action which is most closely connected with the attainment and with the use of the material requisites of wellbeing. Thus, if it is a study of wealth on one side; it is also equally true that *and on the other side (perhaps more importantly) it is the study of mankind.*

In a nutshell the substance and summary of the entire study of economics right from 1776 or earlier age, has different thought of school, but in precise and to sum up, *economics is a study on man and its well being.* The attributes of economic theories has been classified into 4C namely….

Chart / Diagram No. I:



Application: Let us see, how author applies for the 'Growth of family (Generations) and Business' in two distinctive situations. S***ituation*** 1; One who *'Applies the basics of economics'* in the growth and grooming of family or business. The very *First tenet C stands for the* ***creation****s.* In simple term, it means, acquiring, having, acquisition, getting, generating are nothing but *creations* of wealth, knowledge, generations, goodness, fame and good will etc. For instance, we have created wealth, families, organizations, knowledge and lot more. The second *C stands for consumption;* it gives inferences of application, utilization and usages of creation, what we did in the first C. These both Cs have an interlocking relation in growth and grooming.

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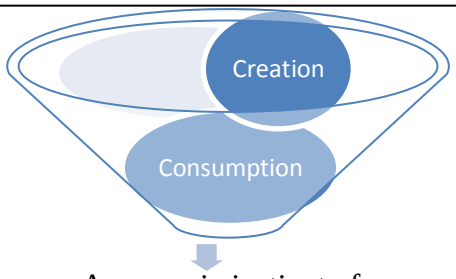
Chart / Diagram No. II

Showing Instinct Process of Life

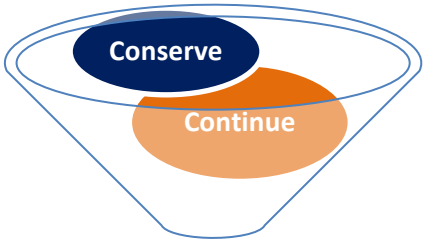


An organic instinct of human life

Thus, creations and consumptions are two faces of human life and indeed, that is the very precursor as well as yard stick of growth, via input and output process that is happening. To take further leap into that, other two ***Cs*** will work:

Chart / Diagram No. III

Showing Growth Process of Life



A planned activity of human life. Leads to Grooming, Growth, Connecting & Learning

A very critical analysis depicts that; the basic fundamental of Economics ***'Conserve and Continue'*** is a fulcrum of the "GROWTH & GROOM". Hence in a family or business these two tenets of economics need to be in existence and prevail for keeping "Majesty".

Now let's discuss the **situation 2** as follows:

Situation 2: Complacent on the *'Basics of Economics'* in growth and grooming of family or business.

Once we are 'COMPLACENT' the hurdles begin, because of the comfort zone and 'self centric' behavior and attention. In this situation the two tenets of '*Basic of Economics*' (Creations and Consumptions) certainly exist and prevail, and probably the third one also have its presence (Conserve) but certainly fourth one will be missing (Continue). The very obvious and envisage apprehension is that, the progress and development of either family or business is based on the **"continuity".** It means continuity in generation growth and continuity in business diversification for revenue growth is very much absolute. An absence of 'continuity' may lead to obsolescence.

Further it is observed that, most of the family is headed by the patriarch member, hence his generation growth will keep continuity of family and his wealth. Likewise scion of business is generally from a wealthy and marketable community; hence the 'Continuity' will keep the business growing. The obstinate refusal to comply with the tenets of

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'Basics of Economics' may certainly deplete and doldrums the growth of the family and business respectively.

Thus ***'Timely Right Action'*** without an iota of doubt is a pathway to 5 Trillion Economy. Application of 4 Cs of Economics certainly ignites engine to 'Mass to Masses' process…with this ramp-up thought and stint plan author moved for spade-work with definitive action of "Timely Continuity" to sustain overall growth and grooming of family as well as business.

With this foresight, Author arranged a get together of his family folks and had one to one discourse on the title of the case or rather on 'Emerged Thought' to uplift their respective individual family for betterment and happy long living. The assembly of the family had a happy celebrating ending… And with a note that, the bitterness of author's better-half indeed transformed into a healthy, meaningful and fruitful solution for all family members.

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2. A Roadmap Towards US $5 trillion Economy in 2025: A fallen Angel or Poised to Soar!

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Introduction: Indian economy is one of the fastest growing economies in the world and ranked as six largest economies. It has one of biggest market in the world for all kind of products and services produced worldwide. At the same time it has maintained fiscal discipline after 1991 economic crisis and wins the confidence of all developed economies of the world including Euro group of countries.

As compare to the GDP of April-September 2017-18 (i.e. 62.97 lakh crore), the GDP of September 2018-19 was estimated to 67.71 crore as per the base year 2011-12 price records showed growth rate of 7.6%. The GDP at current prices was also estimated to Rs.89.87 lakh crore during April-September 2018-19 reflects growth rate of 12.8% over the growth rate during the previous year corresponding period. At the same time efforts of Government of India towards accelerating steady development are continually increasing with the sense of dynamism. The estimated Sectorial growth is also positive and shows favorable changes which can meet requirements of target decided. The following table shows the estimated Sectorial growth and GDP to achieve target of US 5 trillion economies by 2024-25:

Table 1.1 Estimated Sectorial growths.

Sector	**GDP in 2017-18**		**Projected GDP 2024-25**			
	Value at current prices (Rs. in crore)	Share in GDP	Value at current prices (Rs. in crore)	Value at current prices (US$ billions)	Share in GDP	**Required normal Growth rate**

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GDP	16773145	100	36000000	5000	100	11.7
GVA* for Agriculture	2594729	17.1	5040000	700	14	10.1
GVA* for Manufacturing	2530311	16.8	6480000	900	18	14.6
GVA Services	8176002	53.9	19800000	2750	55	13.7
*GVA: Gross value added.						
Note 1: Average exchange rate of Rs. 72/- for US $ 1 has been used for the calculations.						
Note 2: Construction, Mining and Electricity department share assumed to remain constant between 12 to 13 per cent of the GDP.						

Source: Department of Industrial Policy and Promotion, Ministry of Commerce & Industry, GOI.

The above table 1.1 shows that the current share of Agriculture sector & its allied activities is 17.1% of total gross value added which is approximately US $ 402.50 billion (Value in rupee is Rs. 25,94,729 crore) and expected to grow to the 14% by 2024-25 (i.e. Rs. 50,40,000 crore and equal to US$ 700 billion).

The current share of Manufacturing sector is 16.8% of total gross value added which is approximately US $ 390 billion (Value in rupee is Rs. 25, 30,311crore) and expected to grow to the 18% by 2024-25 (i.e. Rs. 64, 80,000 crore and equal to US $ 900 billion).

The current share of Service sector is 53.9% of total gross value added (Value in rupee is Rs. 81, 76,002 crore) and expected to grow to the 55% by 2024-25 (i.e. Rs. 1, 98, 00,000 crore and equal to US $ 2750 billion).

Considering the data given in above table no.1.1 target of growth of US $ 5 trillion economy is achieved from these three sectors by following way:

Table 1.2: Sectorial Contribution to GDP (in US $)			
Sector	Agriculture & Allied Activities	Manufacturing	Services

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Contribution to GDP in US$	1 trillion	1 trillion	3 trillion

The above table 1.2 shows that the roadmap of three sectors of Indian economy, who contributes to achieve target of US $ 5 trillion by 2025. Out of these three sectors Service sector will have to contribute US $ 3 trillion whereas Manufacturing and Agriculture sector with its allied will contribute US $ 1 trillion each to the target.

The above picture of the target goal gives us strength to contribute to the growth and development of nation but at the same time when we speak about our strength as a nation we have lot of strength, opportunities, weaknesses and threats also. Being a crusader in the new dynamic era of globalization, we need to concentrate on SWOT analysis while moving towards target.

Strength and opportunities as a nation:

Indian economy is one of the fastest growing economy and contributing to the world development by all the possible ways. This contribution can be said as a strength and opportunities of nation and discussed below:

1. India is one of the highly populated countries of the world followed by China. In 2030, India will be ranked top in population. In 2020, India will be 'young Bulge' with average age of population will 29 years. By 2035 it has more than 40% population between age group 28-35 years. So, it has strength to provide quality human capital to nation as well as world. Most of the western countries and developed EURO nations have negative or zero rate of child birth. So they have a need of quality human capital to handle their day today affairs. India has a chance to become top quality human capital provider in all sectors of development worldwide.
2. India is the world's largest & fastest growing economy and currently ranked as the sixth largest economy. With this growth, its commitment to fiscal discipline, increasing FDI inflows, efficiency in providing services, sound external position, comprehensive structural reforms and improvement in Global Competitiveness & Innovation

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Index attracts to the world investors to contribute the overall development of India.

3. The IMF projects that India would reach GDP (at current prices) of US $ 4.60 trillion by 2022-23. GDP growth of India was 6.7%, 7.3% and 7.4% in 2016-17, 2017-18, & 2018-19 respectively and same will continually increase till 2023. According to predeterminations of Morgan Stanley, "GDP of India could reach US $ 6 trillion in 2027, if they continued on the same path.
4. Government of India has launched "Make in India Campaign", on 25th September 2014, is a major national initiative which covers 25 sectors with ability and capacity to make India as a global manufacturing Hub. The campaign aims to achieve target of manufacturing growth to 10%. Campaign works hard for introducing a business friendly regulatory environment, enhancing the ease of doing business and improving manufacturing infrastructure, and many more things to boost manufacturing services.
5. Considering the efforts of Government of India, the potential to achieve target of US $ 5 trillion economy by 2024-25 is within the sphere of possibility.
6. With the fourth industrial revolution, the industrial landscape has been drastically changed with the new innovations like artificial intelligence, robotics, big data block chain etc. helped to build on the backbone of digitalization, are fast changing manufacturing. It has also been changed the dynamics of the market with the emergence of innovative business models. Innovative business model has bifurcated irrelevant and traditional services from their manufacturing.
7. Sector wise projection shown in above table no.1.1 is not impossible after considering above strength and challenges.

Weaknesses and challenges as a nation:-

Knowing all our strength and opportunities does not mean that you will reach safely towards your pre-decided goal. Going towards goal is not that much easy as we think. There are many hurdles in the path of success. These hurdles are popularly known as challenges. To overcome on these

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challenges we should aware about our weaknesses first. As a nation India has many weaknesses and challenges ahead in the path of development. These weaknesses and challenges are discussed below:

1. India is an agrarian economy. Till today it is a backbone of rural Indian economy and more than 57% population is depends on Agriculture and it's allied activities. Agriculture sector provides all kind of raw material to manufacturing sector. So, goal of US $ 2 trillion GDP out of US $ 5 trillion GDP is depends upon agriculture. Toady Indian agriculture sector facing lot of problem like capital, increase in expenditure, low productivity, unfavorable weather condition, water and soil pollution, high cost of seeds, fertilizer, and manures, fall in market due to heavy supply, reduction in government subsidy, status of farmers and farm, losses in allows activities. Small pieces of land, heavy burden on agriculture due to unemployment in manufacturing and services sector. So, the performance of agriculture sector is below the par requirement of GDP. Agricultural economists and expert's in the field says that, the current year actual contribution of agriculture sector to the GDP is reduced to 1.9% from 2.2% of subsequent year. There is no chance in the improvement in the situation in next two years. In addition to the same, government decisions like demonetization and improvements in direct tax legislature badly affects on rural economy, framers and small and medium entrepreneurs'. Even though central government denies, there is total failure of demonetization and GST reforms and cannot be neglected.
2. Indian manufacturing sector is not doing well in current situation. To run economic cycle successfully there should be new investment in the manufacturing sector. Investment (either FDI or FII or both) helps for installation of new units in the manufacturing sector and creates lot of opportunities to many avenues of development like employment, raw material, processing and by products units, sales & promotion and many more. Now a day's Indian manufacturing sector going through

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recession. The demand for most of the manufacturing goods is continuously decreasing. Market share of top companies is slashed down to half as compare to subsequent year. Most of the companies started labor and employee retrenchment and lay off for cost cutting. There is no demand for electronic goods and luxury products even after reduction in the price up to 20% to 40%. Most of the construction companies facing heavy losses due to no demand for flats and row houses in the major cities. Government owned and public companies financial performance is very poor and most of them are with re at the stage of liquidation or disinvestment. Central and state governments are not capable to provide capital or make investment in such project and concentrated on disinvestment in public sector industries and units.

3. Service sector plays vital role in growth and development. It contributes more than half to the GDP of the nation. More than 60% employment of the nation provided by service sector by way of more than 28 major services. But most of the investment either by way of FDI or FII comes in service sector. So, maximum portion of the revenue earn by service sector goes to the foreign investors by way of dividend and interest. Due to the economic slowdown worldwide, current policies of government and internal unrest investors are not willing to invest in India. So, flow of FDI & FII is considerably reduced in last three quarters as compare to subsequent year's inflows. Most of the foreign investors withdrew their investment due to particular state government's policies and decision. Supreme Court decisions also badly affects on foreign investment.
4. The banking sector of India is in trouble due to increasing NPA. Most of the business houses are not able to repay the loan taken and at the stage of declaration of insolvency. Their debts are increasing continuously with increasing losses. So economic cycle is at the stage of collapse. RBI also increased restrictions on banks, to sanction loans. In last quarter CRR and REPO rate are remain unchanged.

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5. Central government doesn't have funds for investment, relief packages and to meet the expenditures of welfare schemes. So, they withdrew 70% corpus of RBI to meet their expenses. All funding for infrastructure projects has been stopped due to unavailability of funds with government.
6. Government brought GST under "One Nation, One Tax" scheme to simplify tax structure and to increase in tax collection. But even after two years of implementation tax collection target is not yet achieved and deficit of government is increased.
7. Government scheme like MUDRA Bank, Start up, Skill India fail to show positive result till today.
8. India has a heavy competition from countries like China, USA, Japan, Korea and Germany for quality products and services. We are not yet capable to reach at their level in terms of quality, quantity and price of the products and services.

Considering all above factors, we can say that the central government trying hard with sincere efforts to achieve the pre-decided goal to became a one of the financial super power of the world. But we have more challenges and threats than opportunities and strength. So, target decided may cross 2025 and we may achieve the same in 2030, with proper planning, strategies and policies.

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3. Global Meltdown: Challenges before Corporates: Study of Behavioral considerations in developing Performance Appraisal measures for optimum output in limited resources: (Behavioral Economics) - With special reference to manufacturing organizations"

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Abstracts: Few decades back companies were hunting for employees to work for them. Employees' qualification hardly matters for them. Employees, in turn, were hardly had tendency to shift their jobs. Hence we can see our elder generation who has spent their whole career with single company.

Today, the picture is exactly reverse. Company needs qualified persons, so there is competition among jobseekers. On the other hand employee retention has become a big problem in all industries. Every company is trying to offer best to the employees than its competitors so that they can attract experienced personnel associated with the competitors. Still companies fail to retain the employees. Why? Why it happens? The answer lies with limited resources. Companies fail to justify the motivational need of the employees due to improper distribution of limited resources while designing the wage policy. Every person is different by behavior. Hence, they get motivated by different things. For few employees, money may be the criterion, whereas for few safety etc. Company has to manage all employee needs and that too, in limited funds. That is why this subject may get included as a part of economics. The perfect situation, in economics, is when demand equals supply, so here researcher is trying to focus on how an enterprise can equal employees' emotional needs with the supply i.e. incentive pattern/appraisal etc.

Introduction: As per Sewell (2005), Behavioral finance is the study of the influence of psychology on the behavior of financial practitioners and the subsequent effect on markets.

As per Thaler (1993), "I think of behavioral finance as simply "open-minded finance. As per Belsky and Gilovich (1999), 'This area of enquiry is sometimes referred to as "behavioral finance," but we call it "behavioral economics." Behavioral economics combines the twin disciplines of psychology and economics to explain why and how people make seemingly irrational or illogical decisions when they spend, invest, save, and borrow money.'

From the above definitions it is clear that there is relation between human behavior and their decisions as well as level of satisfaction which ultimately reflect on his and ultimately economic growth. Hence it becomes necessary to study the behavioral aspects of a human being.

Human behavior is dependent on various factors i.e. his family back ground, authority, responsibility, experience etc. but importantly it is dependent on the inherent factors. Few things we cannot change about ourselves though we want to. Few of us are aggressive whereas few are conservative. This affects our

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decisions at different market conditions. These inherent factors come with us by birth, may be genetic or based on the situation of 'planets and stars' at that time (astrology).

International Status and National Status: At international level, study/research of Behavioral Finance or Behavioral Economics has been taken place moreover with the financial markets. These resulted in the conclusion of how people take decision as far as investment in the financial market is concern. Whereas researcher, through this research, is trying to focus on the employee behavior in respect to their motivation. How companies can maximize employee motivation in available resources i.e. funds. As far as human resource is concern lots of theories has been established and used for recruitment policies as well as performance appraisal e.g. Psychometric Test, Need Hierarchy Theory, and Transactional Analysis etc. Hence no research, as if now, has taken place to bring out the formula which can give the proper solution i.e. what and how much should be provided to whom in available resources?

Suggested Solution: The question mentioned above may be resolved; up to significant extent, by studying the human characters which, researcher feel, is depend on the following factors.

A. Zodiac
B. Time-Learning-Motivation Theory
C. Self-satisfaction
D. Work Place

A. Zodiac and Efficiency:

Every person, in this world, is unique, not only by his looks but by nature as well. Why is it so? There may be many answers like genetic effect, cultural effect, sun sign effect etc. If these are the answers, then why two persons belonging to the same family have different thinking? Why two persons, having same parents, act differently on a particular situation? Why two persons, having same birth date and time, have different nature?

Here more specific answer can be – due to the different mix of the birth date, birth time and birth place. This is known as Kundali, as per which our Moon sign is being decided. If we will take two persons of same Moon sign, there is high possibility of matching their nature with each other. Hence the aim is to examine a person's nature belonging to a particular Moon sign and its effect on the productivity and efficiency. As per this we can describe person in three categories Emotional (conservative approach), Stable (static approach) and Practical (aggressive approach). Further from job selection and/job satisfaction point of view we call them as Creative, Static and Ambitious respectively.

Below is the discussion on Raashi and its inherent nature. These Moon signs and their nature given in the book Rashi-Chakra by Sharad Upadhye is given in the Table 1.

Table 1. Zodiac and efficiency

Moon sign	Nature	Approach
Mesh (Aries)	Highly practical, Aggressive	Aggressive
Vrushabha (Taurus)	Highly emotional	Conservative
Mithun (Gemini)	Good grasping power, good analyst, childish, always fresh, good entrepreneur	Aggressive

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Karka (Cancer)	Emotional, hard working	Conservative
Sinha (Leo)	Practical, egoistic, aggressive	Aggressive
Kanya (Virgo)	Scientific thinking, confused mindset	Conservative
Tula (Libra)	Self controlled, always satisfied, flexible, have patience	Static
Vruchhik (Scorpio)	Hard working, resistance power	Static/Aggressive
Dhanu (Sagittarius)	Self respect, always searching for knowledge, goal oriented	Static/Aggressive
Makar (Capricorn)	Professional view	Conservative
Kumbha (Aquarius)	Matured, research oriented, resistance power, happy going, unprofessional, good grasping power,	Static/Aggressive
Meen (Pisces)	Family oriented	Conservative

From the table it is clear that different moon sign has different nature. According to this, we should design different compensation packages for different categories. E.g. moreover monetary benefits (performance incentives with variable pay structure) should be provided to the employees with aggressive approach and non-monetary (protecting basic needs, safety etc. with fixed pay structure) for conservative approach. Workshops, seminars and learning sessions are assumed to be given to all.

Employees with conservative approach are good at providing option or alternatives, whereas selection and implementation stands good for aggressive approach. Hence, hierarchy and control system, in an organization, also need to be proper so that organization may get benefited through proper coordination among both the approaches.

Now you will ask that how one can say that emotional people are creative. Let us have look on following explanation.

Emotional mind always try to search ways to resolve problems, if any. Hence, they get more alternatives to choose from considering emotions of opposite people which turns into innovative idea generation that give long term benefits.

Practical/aggressive minds, on the other hand, try to work hard on the given standards and try to achieve targets by hook or crook. Hence, they hardly think of good alternatives. It results in short term benefits and losses in the long run.

B. Time-Learning-Motivation Theory:

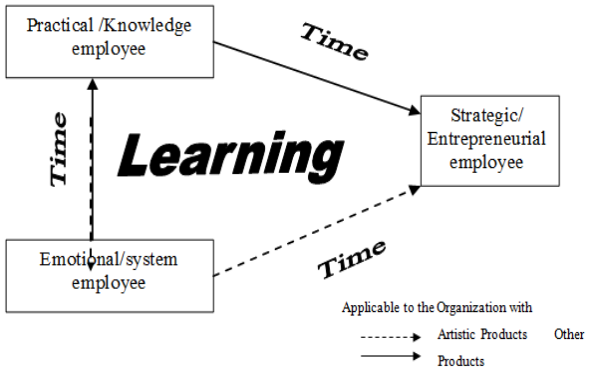

Figure 1. Time-Learning-Motivation Theory

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The figure 1 gives clear idea of how important time and learning is for motivation in different kinds of organizations. Organizations may be of two types – manufacturing and service. Here, in this paper, researcher is focusing on manufacturing organizations. Researcher has classified the output/product as (i) Artistic products and (ii) other than artistic products. The former includes products which require creativity, emotions. E.g. handicraft, furniture, art industry etc. whereas later includes products which require practical approach, logical thinking. Every organization wants to convert their system employees in entrepreneurial employees for strategic management purpose. It can be possible only through practice and learning. Hence, in case of organizations other than artistic products, a system employee has to go through the level of knowledge employee to become entrepreneurial employee. It requires lots of learning sessions and time.

In case of organization with artistic products, an employee has less importance of becoming practical as he/she learns it while working with the product.

In the explanation above researcher has used his findings through observational data. As per his findings, emotional person can become practical with experience, learning and time whereas practical person finds it difficult to get converted in emotional category. Hence, employee who has experienced all stages mentioned in the figure 1 can surely become better strategic employee than the one who converted directly from knowledge employee. The type of organization/industry decides the importance of an approach (emotional/practical) for recruitment, appraisal of an employee and ultimately for organizational growth.

Hence,

Strategic thinking= f (creativity, practicality),

Whereas,

Creativity = f (emotions, time, learning).

The above equation stands good till certain level. If that level of emotion is crossed then creativity starts falling down. That level differs from person to person. The diagramed expression is given in the figure 2.

Emotions and creativity: The graph goes on improving with the improvement in the Time and Emotions. After a point it starts falling down as high emotions lead to less work involvement which leads to punitive actions. This turns in to job dissatisfaction where he/she stops thinking of the organization. At this point, instead of taking punitive actions, if he/she is provided with certain suitable motivational tool then that person may get improved. And that motivational tool should be something which can reduce his emotional thinking and make him/her practical.

E.g. providing family atmosphere, workshops, gatherings, cultural events etc.

Emotions Time

Practicality Time

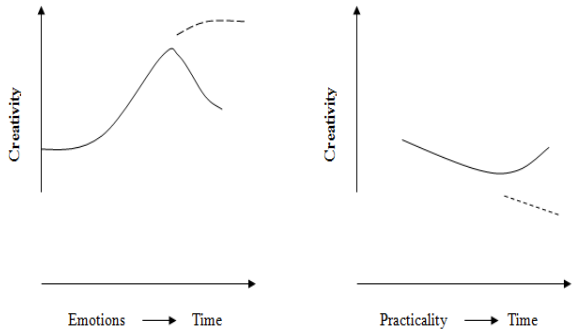

Figure 2. Creativity, emotions and practicality

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Practicality and creativity: The graph falls down with the improvement in the Time and Emotions. After a point it starts improving as time improves the creativity. Such creativity is the learned one and not inherent. If he/she fails to learn then the graph may fall further. This learning may come through various programs, workshops, and other incentive patterns which will boost his/her entrepreneurial abilities.

C. Satisfaction and Efficiency:

In this study, as mentioned earlier, we are concentrating on the motivational need of employees. Satisfaction from the results we get of the decisions made by us is another motivational factor. To describe this point let us look at the following example.

If an employee need to make investment decision, following questions are required to be answered.

(i) How much maximum amount he/she is willing to invest to earn a specific amount of profit?

(ii) What actual amount he/she has to invest to earn an expected profit?

If earlier is greater than later, the satisfaction level is high and vis-à-vis. This can be elaborated as under.

A person is willing to invest Rs.100 to earn a profit of Rs.50. Actual Investment is Rs.100. Actual Profit is Rs.50.

This time satisfaction level is equal to one. This can be given with a formula.

Sei = (Ie/Ee) / (Ia/Ea)

……(1)

Sei = (Ie/Ee) x (Ea/Ia)

……..(2)

= (100/50) x (50/100)

= 1

Here,

Sei : Satisfaction Level in relation to earnings and investment

Ie : Willingness to invest

Ee : Expected Earnings

Ia : Actual Investment

Ea : Actual Earnings

If Actual Investment is Rs.120. Actual Profit is Rs.50 then his satisfaction level will reduce.

Sei = (Ie/Ee) x (Ea/Ia)

= (100/50) x (50/120)

= 0.83

Hence, satisfaction level will increase in either of the following situations.

Increase in Ie

Increase in Ea

Decrease in Ee

Decrease in Ia

And decrease in either of the following situations.

Increase in Ee

Increase in Ia

Decrease in Ie

Decrease in Ea

Satisfaction has functional relation with the efficiency and ultimately with growth. i.e. High satisfaction – High efficiency – more chances of growth or vis-à-vis. If employee is provided with ample scope for decision making with secured (job safety in case of wrong decision) atmosphere, then his satisfaction and motivation level will increase with time and learning. The only important assumption need to be considered in this case is absence of unsecured environment.

D. Birth place, Work Place and Efficiency: Efficiency of a human being is also dependent on place (Latitude, Longitudes) of his birth as well as where he works. Researcher has

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worked in different parts of India. One interesting thing the researcher found that thinking of people changes with the place they belong to. Researcher studied India in three parts – North, Middle and South. People in a particular part have similar opinions about their own growth but that differs with another part. Let us look in the following findings.

North Zone : It Includes North part of India above the Middle Zone. People from this zone are very much practical. They can go anywhere, wherever they see their growth. They give more weightage to the financial aspects rather than emotional.

Middle Zone : It includes states located in middle India i.e. Maharashtra, Chhattisgarh, Orissa, Some part of Andhra Pradesh and Madya Pradesh. People from these states are moreover emotional. They like to work nearby their hometown. They think about emotional satisfaction rather than financial satisfaction.

South Zone : It Includes South part of India below the Middle Zone. People from this zone are very much practical and full of talent. They are very flexible as far as work is concern. They can go anywhere, wherever they see their growth. They give more weightage to the financial aspects rather than emotional.

Only exception is the people living in the hilly area, irrespective to any of the Zones they belong to, are moreover emotional.

Due to the opportunity and personal growth aspect most of us work away from the home-town. Here, researcher feel, the satisfaction level of a human being is dependent on the distance of his work place from his home town. In some situations people hesitate to work in the home town due to some reasons i.e. may be he/she belong to well-known family and he has to start with a low profile job etc. In such situation they are more comfortable while away from their home town. Whereas, in some situations people are willing to stick their home-town. They feel happy and satisfied though the financial or growth factor is less. Conclusive part is that the distance from home town result in the increasing practicality and ultimately work-efficiency.

If we correlate the above discussion with the mentality of the people from the different Zones mentioned earlier, we will get the reasons of how people from different zones behave in certain situations.

From the above discussion it is clear that,

Efficiency or growth = f (Distance from home town)

Hence this function stands good up to certain point. Further to that point, efficiency will start dropping due to the emotional attachment towards the family members and home town. This Drop point differs as per the place/zone that person belongs to. This is expressed in the figure 3. At and after the Drop point people are not able to take decisions properly. Hence it results in the reducing efficiency of a person as well as his growth. This reduction, from the economic point of view, result in reduction in the economic growth. This Drop point will surely be there, even at early stage, for the person belongs to middle zone. But for the person belonging to the north and south zone it will be at far later stage, even for few of them this point may not exist. This does not mean that the people from north and south have no emotions. They do have it but they prefer to be practical rather than emotional.

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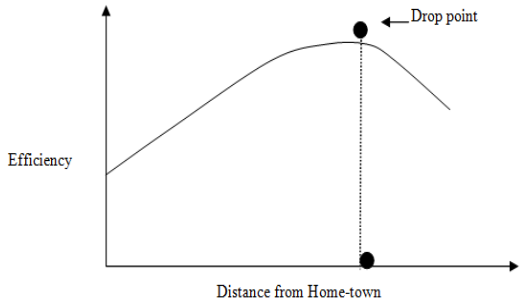

Figure 3. Relation between distance and efficiency

Figure 3. Relation between distance and efficiency

This can be proved if we will look for the top authorities of most of the organizations and the place they belong too. We can find presence of North Indians as well as South Indians in all part of India as well as all over the globe. People from Middle India are very hard to find.

Here, the satisfaction can be measured with the help of the proportionate change in efficiency to the proportionate change in the distance.

Sdp = Change in efficiency/Change in distance …… (3)

If there is increase in the efficiency by 5 percent due to the increase in the distance from home town by 100 km. then 5/100= 0.05. This is the addition in the existing level of satisfaction (equation 2).

Let us club all equations together to get exact amount of benefits we can provide to the employees so that they can reach to the maximum level of satisfaction in the given resources.

The researcher has framed few equations, for the said purpose, are as below:

Minimum Appraisal Amount = [Current Pay * {(Sei+Sdp)*Ez}%]……(4)

Monetary/variable reward = AA *Mz…… (5)

Non-monetary reward = AA*NMz…… …… (6)

The table below is a summary of the entire discussion that researcher has made throughout this paper.

(1) Sei	**< 1**	**=1**	**> 1**
	0.83	1	1.25
(2) Sdp	**< 0**	**= 0**	**> 0**
	- 0.05	0	+ 0.05

		Reward Proportion in 100%	
Inherent nature based on Moon sign	**Efficiency rank as per zodiac (3) Ez**	**Monetary (4) Mz (Ez/120)*100**	**Non-monetary NMz (5) 100 – Mz**
Refer Table 1	***Points***	***% (approx.)***	***% (approx.)***
10 = Less important 120 = Highly important	10	8	92
	20	17	83
	30	25	75
	40	33	67

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	50	42	58
	60	50	50
	70	58	42
	80	67	33
	90	75	25
	100	83	17
	110	92	8
	120	100	0

Note: 'Ez' may be different for the industries with different kind of product. For few companies zodiac with conservative approach is important whereas for few aggressive. Hence, the rank should get increased with the importance.

Let us see an example for this.

An employee is getting payment of Rs.10000.

Sei = 1.25

Sdp = + 0.05

Ez = 10

Then, what should be the minimum appraisal amount he/she should get? What should be the proportion of monetary and non-monetary rewards in the total appraisal amount?

Putting these figures in the equation will give following result.

Minimum Appraisal Amount = [Current Pay * {(Sei+Sdp)*Ez}%]

= [10000 * {(1.25+0.05)*10}%]

= 10000*13%

= Rs.1300

Monetary/variable reward = AA *Mz

= 1300 * 8%

= Rs.104

Non-monetary reward = AA*NMz

= 1300 * 92%

= Rs.1196

We can decide on any combination by using this equation. The only thing researcher would like to add/subtract, in the above equation, is the economic conditions i.e. inflation/recession rate, cost of living etc. Researcher feels that it should range between 3 to 6 percent.

Conclusion:

1. The time to apply appraisal measures and the appraisal measures itself should be flexible to keep employee motivation intact.
2. Company should adopt appraisal measures based on inherent nature of a person which can be grouped in 2 to 3 groups. i.e. practical, static, and emotional.
3. Company need to consider the time and learning factor based on the group he/she belongs to and the type of industry i.e. Artistic and other than Artistic.
4. Once these measures are decided, Company need to apply those measures on correct time i.e. when satisfaction level start dropping below 1.
5. Even the same measures can be adopted at the time of recruitment so that time factor can be utilized effectively. E.g. the system employee with emotional behavior can take less time to suit for the industries which has artistic products like furniture, statues, advertisement etc. Whereas the same will require more time to suit for other industries.

Researcher knows this study needs more inputs and practical touch, and is working on the same.

In this paper, researcher tried to find out the behavioral elements and their impact on

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motivation. Hence, the questions need to be focused on are:

1. How to measure efficiency?

2. What and how much impact does the birth place have, considering Latitude and Longitude, on the human behavior?

This paper is totally based on my observations and informal interviews with different authorities in different organizations during past ten years.

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4. E-Commerce – an Emerging Trend in Indian Retail Sector and Catalyst in Development of Indian Economy

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Abstract: E-Commerce is a very popular concept and gaining the rapid pace in Indian retail sector. It is the future of the shopping. It is gaining very rapid acceleration in India. Indian E-commerce industry witnessed handsome growth in the last few years and the reason behind it is increased internet user base and favourable demographics. E-Commerce will also have a great future in India but the same time there are many challenges also which needs to be addressed properly. This paper mainly emphasizes on present status future, scope and challenges of E-commerce in India.

Keywords: *E-Commerce, Indian Retail Sector, Challenges of E-Commerce*

1. Introduction

E-Commerce stands for electronic commerce, which is the exchange of goods, service and information via internet. It is not only selling of goods and services online but also process of developing, promoting, spreading awareness, delivering, serving and paying for goods and services. If you are doing business online then you are involved in E-commerce. It is nothing but any commercial activity that takes place directly between the various parties like business, vendors and customers through an electronic communication and digital technology. E-commerce is considered as a modern business methodology and it perfectly address the need of businesses, merchandisers and customers. E- Commerce provides ease of doing business to the organizations and most important convenience to the customers. It has become the important tool for large and small business in the area of sales but also engaging them throughout their shopping journey.

In the beginning growth of E-Commerce was very slow and it is because of low internet penetration and low users of internet but now the scenario is changed. E-Commerce is growing exponentially and gaining importance in the Indian market.

2. Objectives of the Study

1. To study the present scenario of the E-Commerce in India
2. To study the challenges faced by E-Commerce in India
3. To understand the future of E-Commerce in India

3. Research Methodology

This research is descriptive types of research where the analysis is done on the basis secondary data from various literature, Research papers, books and data which are readily available online.

4. Theoretical Background

a. Models of E-Commerce

i. B2B (Business to Business)

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Under this model one business sells to other business. It involves those companies doing business with each other like manufacturing selling to distributors, wholesalers selling to retailers. An example of B2B E-Commerce is Alibaba *(In B2B model the major game is on quantity and price negotiations).*

ii. B2C (Business to Consumers)

This model is the general model in which business sells products to consumers over the internet. In this manufacturer displays products on their own websites or Mobile App and consumer order it through their platform. Example if any consumer ordering mobile phone from Flipkart then it is the example of B2C E-Commerce.

iii. C2B (Consumer to Business)

This model includes consumer selling products and services to business. In this consumer creates values and business directly consumes value. For example when consumer gives opinion and review and business adopts it for the improvement purpose then it is the case of C2B E-Commerce.

iv. C2C (Consumer to Consumer)

It majorly focused on transaction of products and services between consumers, in this innovative way in which consumer interact with each other. It involves electronic transaction between two consumers through third party.

v. M-Commerce

This is the famous and most demanded category of E-Commerce. Consumers are very much demanding because of the convenience *(All the purchase can be done with Mobile)*. Example All the E-Commerce websites are now also having their applications readily available on mobile.

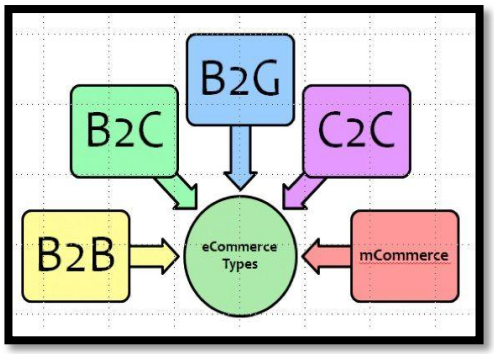

Figure No. 1: Categories of E-Commerce

5. Review of Literature

(Mr. Abhijeet in 2013) in his research noted that e-commerce is changing the way the business is transforming is phenomenal. Technology played very important role which altered the geographic boundaries and proved its metal.

(Mr. Madhukar sarode in 2015) in the research commented that the E-Commerce development had reduced the gap between the manufacturer and consumer

(Mr. Saxena in 2015) in her research explained the role of E-Commerce in Indian economy. It basically supports the small and medium enterprises to flourish and accelerate their business. It also has the challenges when it comes to cyber security and internet penetration.

(Elizabeth and Mc Gregor 2000) mainly analysed the impact of E-Commerce on consumer behaviour. In his research he focused on policies initiatives, and novel idea for future research.

(Dasgupata and Sengupta 2002) focused on future prospects of E-Commerce in India.

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(Raghunath and Panga 2013) commented that many times new internet users are very reluctant to interact with online business. In case of Adaptation of e-services there are so many confusion in consumers regarding online business. It provides the very much opportunities in E-Commerce growth and also focused on the consumer protection issues.

6. E-Commerce in India

E-Commerce in India growing in rapid pace and also provide tremendous opportunities in the developing countries like India. In 1996 E-Commerce banged Indian Market with matrimonial website and Job providing sites. At that time the main issue was the speed of internet and penetration in general public. The First E-Commerce website in India was reddif.com (*It was the high traffic website in terms of Indians and Non Resident Indians)*. In last five year there is the exponential growth of E-Commerce in India which is also the boosting factor in Indian economy. Today E-Commerce is the very important factor which influences the consumer behaviour in significant way. The websites are involved in the selling of goods and service. E-Commerce basically targets each possible customer/consumer for every possible goods and services. These websites are known as 'Multi-Product E-commerce Sites'. There are single product selling E-Commerce sites that focused on the single product and special target customers/consumers. The changing technology is changing the scenario of shopping in significant way. Out of total internet users in India more than 60% visits E-Commerce websites and shop there. The enhanced standard of living and technology adoption provides a readymade platform for the E-Commerce growth in India.

E-Commerce companies like Flikart, Snapdeal and India Times shown the potential in the growth of Indian Economy. Due the E-era and the E-Commerce Buzz in Indian Market many new players are also trying their luck, but the same time huge competition is also the triggering factors which keep the balance in the competitive environment.

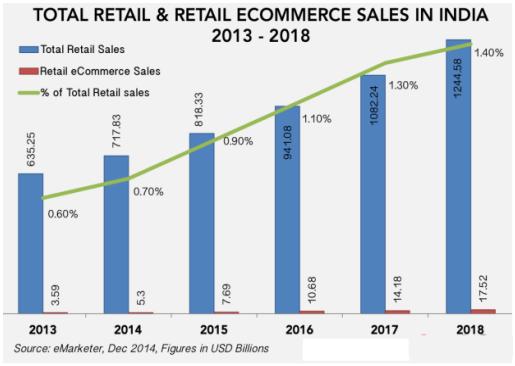

Fig No. 1: Total Retail and Retail E-Commerce sales in India, 2013-2018

Leading Online stores in India

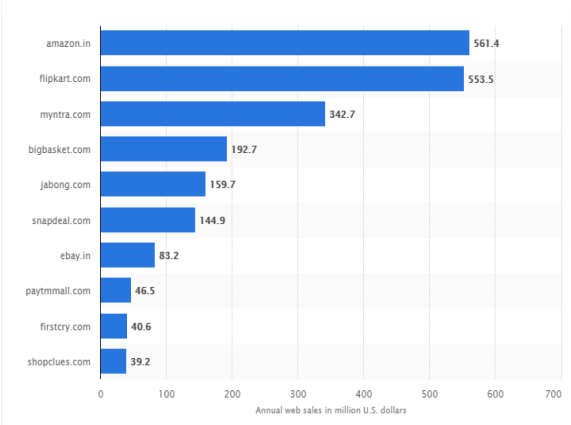

Fig No.2: Leading Online stores in India by net E-Commerce sales

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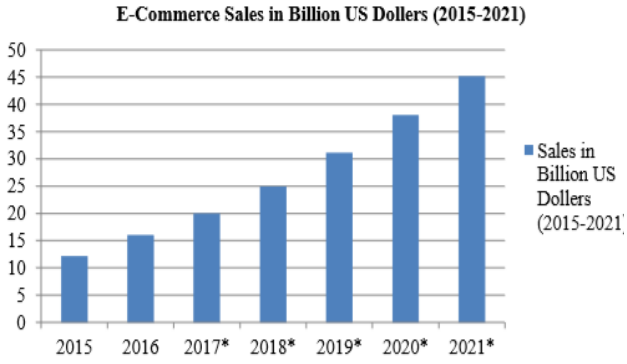

Fig No. 3 E-Commerce sales in Billion US Dollers (2015-2021)

The above statistics shows the development of E-Commerce and its contribution in the overall development economy of the Nation.

7. Barriers to E-Commerce in India

Particular	Details
Poor Internet Infrastructure/ Facility	Internet is the soul of the E-Commerce. In India the penetration of internet especially in rural India is very poor which is a great barrier to the development of E-Commerce in India.
Insecurity feeling	Most of the public is thinking that the use of the E-Commerce especially the monetary transaction is not secure and they feel that there may be chances of fraud.
Supply Chain and Logistics	The issue is of the supply chain especially to remote area still E-Commerce companies are finding it difficult to serve these remote customers.
High Competition	With the success of the Flipkart now mostly entrepreneur started thinking about the E-Commerce development and it created huge competition from domestic and international players.
Tax Structure	Changing and different Tax structure which majorly created accounting problem. Different countries are ever charging the separate TAX structure which is again the problem.
Cyber Law	The unorganized structure of the law which is hindrance in E-Commerce safety and Security.

8. Conclusion

E-Commerce made our lives very easy. It mainly provided convenience and luxury in shopping. This also changed the consumer behaviour in significant way. In present scenario E-Commerce is in boom in Indian Market and also growing in fast pace. There is expectation of 4 fold growth in the sale of E-Commerce in India up to 2021 as compared to 2015. This growth is due to the advancement of technology in telecom and Computer world, government initiatives in digitization, digital mode of payment, and easiness in shopping (24X7) which boosts the confidence to customers/consumers so that they can easily interact with E-Commerce *(Excluding some percentage of consumer/customer who still think E-Commerce as not secured).*

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5. Generic Medicine for Masses: Performance, Problems, Prospects and Empirical Insights

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Abstract:
Generic pharmaceuticals are increasingly becoming a formidable force in the market. Generic drugs are been increasingly used as substitute for the branded drugs due to the cost and many other factors. After the expiry of patent or marketing rights of the patented drug, generic drugs are marketed. Generic drugs are available at affordable prices with maintaining quality. These 'Generic' formulations balance public interest as critical disease like cancer, AIDS etc. We have good production of them but still there are so many issues and challenges due to which Indian population is still struggling to find out the generic medication easily accessible to them. Even doctors are not prescribing generic drugs. There are few government regulatory bodies which take care of the availability of the generic medicines and try to make them available to the Indian population especially to the ones who are below poverty line. The Indian pharmaceutical market is primarily guided by the behaviour and attitudes of patients and doctors. Thus, this study highlights the impact of generic drugs on the behaviour of various stakeholders and its affect on the branded drugs market. Researcher also explores the pharmaceutical drug distribution in area of study, the various issues and challenges relating to drug distribution and its use by stakeholders.

Keywords: Generic drugs distribution, societal consumption pattern, prescription behaviour, brand building.

Introduction to study:

1. Generic Pharmaceutical Market: An Overview

The generic pharma-market reached 500 billion dollar in 2018. The generic growth is three times higher than the overall growth of drugs [1]. Furthermore, 20 drugs will lose patent protection between 2020 and 2024 with the total market value 507 billion dollar [2]. According to expectation of pharmaceutical industry, percentage of generic drugs in the US market will rise from 44 to 61. This growth will enhance the export of pharmaceutical products from India will double every year [3]. Contribution from the Indian pharmaceutical companies is all set to increase due to low cost of worker, innovation, recent success in track record in design operation of high tech manufacturing, testing, quality control, research, clinical testing and biotechnology [4]. Most of the Indian companies have United States Food and Drug Administration (USFDA) approved plants, about 20% of all Abbreviated New Drug Applications (ANDA) to the USFDA are field by Indian companies. Now India's share of the generic market is about to 45%. Hence the contribution of the Indian pharmaceutical industry for the growth of generic drugs in the world is very high [5]. In India, the pharmaceutical marketplace is dominated by doctors and patients [6]. They have a large choice in terms of medication and procedures. This requires a greater reliance on scenario-based planning, a sharper focus on realizing productivity gains from sales and marketing expenditures, and proving the

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value of medications [7]. Prescription drugs are increasingly being branded and sold to consumers with traditional marketing tactics such as advertising and promotion [8]. Thus, brands will have a stronger influence on the behaviour and attitudes of patients and doctors.

2. Indian Pharmaceutical Industry:

The Indian pharmaceutical market is in a phase of transition. Companies are converging their resources and redefining their value chain to face the challenges posed by the product patent [9]. Domestic pharmaceutical companies have been churning out new drugs at a never seen before frequency and have gone on a brand acquisition spree to strengthen their market position [10].

The major players in the Indian pharmaceutical market are Sun Pharma, Dr. Reddy's, Lupin, Cipla, Aurobindo, Candila. Glenmark, Torrent Pharma, Alkem Lab, Divis Lab, Piramal Enter, Ipca Lab, Glaxo SmithKline, Abbott India, Biocon, Jubilant life, Sanofi India, Wockhardt, Pfizer, Dr Lal Path Lab, Merck, Hikal, Novartis India and Eris Life [11].

The Indian pharmaceutical market is estimated to be $ 5.1 billion in year 2004 which is approximately 1.3 percent of the global pharmaceutical sales that stand at USD 317.2 billion. India has 8 percent value share of the global pharmaceutical production market and stands fifth in volume terms [12]. The Indian patent laws (1970) gave Indian companies the opportunity to reverse engineer molecules that were under patent (without payment of royalty) and to sell them at 8-15 percent of the price of the patented drug. The benefits given to SSI units resulted in a mushrooming of small units and this has resulted in the industry being highly fragmented (there are nearly 20,000 licensed companies). The top 10 companies control 30 percent of the market, eight of these are Indian companies. By comparison, the global top ten companies account for about 45 percent of the International market (Parmar, 2005) [13].

Thus from an overall perspective, given the pace at which the market is growing, India will be most likely be among the top three pharmaceutical markets by 2020 in terms of value and 6th largest in terms of absolute size [10].

With the advent of the awareness about health in the masses, domination and penetration of health insurance schemes countrywide coupled with the improvement in the medical technology and infrastructure, the growth in the pharmaceutical sector especially in the field of generic drugs is inevitable in days to come.

Scope of the study:

As number of drugs are gradually going off patent and also a blend to push more of generic drugs to have better margins, resulting in the erosion of brand positioning of branded drugs and hence creating a competitive market with the entry of generic versions of the same formulation of branded drugs. This study emphasized on the role of generic drugs on the societal consumption pattern. Thus, providing a linkage between the brand image of the branded drugs and the benefits offered by generic and branded drugs to the society. This research was an attempt to match the theoretical concepts of brand positioning with the actual prescription behaviour of medical practitioners.

Limitations of the study:

First limitation is an attitudinal issue. Patients may be resistant to going on a

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generic medication because they perceive them as inferior to their branded counterpart. Secondly, Generics are often considered second-rate medications due to perceived poor compliance with standard manufacturing practices, lack of patient knowledge about generics, and influence of the brand-name company. Thirdly, we often need to consider our patient's personality and past experience when deciding between generic and brand drugs as well. One important question to ask our patients is whether they have taken generics before and what the outcome was. If the patient had a poor experience, they may be biased towards branded medications and willing to pay the higher price. Lastly, the geographical scope is limited to Baramati city; so that issues and challenges in distribution of generic drugs can be correctly identified. It also suits researcher's convenience for data collection on issues relating to use of generic drugs by stakeholders.

Review of Literature:

It was an attempt to undertake research in the area of pharmaceutical branding and promotions in India and abroad. Books and Journals available at Jaikar Library - SPPU, Tilak Maharashtra Vidyapeeth Library - Pune, Anekant Institute of Management Studies - Library, Baramati, Tuljaram Chaturchand College Library etc. have been referred. Articles available from online sources such as World Wide Web, EBSCO, Sciencedirect, Blackwell, Emerald etc. have also been used for the review.

The literature review has been carried in following broad areas namely:

1. Prescription process of General Practitioners (GPs)
2. Cost of treatment in Branded and Generic drugs
3. Attributes perceived important while prescribing
4. Impact of promotions on the prescription behaviour
5. Impact of Generic drugs on the brand positioning of Branded drugs
6. Impact of Medical Representatives on the prescription.
7. Generic drug distribution system in India
8. Issues and Challenges in use of generic medicines in India

Objectives of the Study:

1. To assess the impact of brand image of branded drugs compared to generic drugs on the prescription behaviour of medical practitioners.
2. To study the impact of brand image of branded drugs on the social consumption pattern i.e. the societal benefits offered by branded drugs compared to generic drugs.
3. To study the various issues and challenges relating to generic drug distribution and use by stakeholders.

Hypotheses drawn for the Study:

HI: Relative influence of brand image of branded drugs is more than the generic drugs on the prescription behaviour of GPs.

H2: Relative impact of brand image of branded drugs is more than the generic drugs on the social benefits offered to the customers.

H3: Relative impact of branded drug promotions to the GPs is more than the generic drugs on the prescription process.

H4: Relative impact of branded drug promotions is more than the generic drugs on the pharmacist's preferences.

Research Design and Tools:

1. Data Sources:

Data had been collected from four sources i.e. Doctors, Pharmacists, Patients and

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Medical Representatives for understanding the impact of generic drugs on the buying behaviour pattern and brand sustainability of branded drugs. The literature reviewed regarding the role of each stakeholder in the pharmaceutical market provided the base for generating hypothesis for this study.

2. Data Types:

The nature of the data relevant to the research was demographic and behavioural. The demographic profile of the respondents and their behavioural aspects were gathered for the fulfillment of the objectives of study.

3. Sample Size:

In order to select the representatives among the four category of respondents i.e. doctors, pharmacists, medical representatives and the patients, convenience sampling method was chosen followed by judgment sampling method. Considering the large population of the respondents, in all four categories, 1 per cent sample was selected under each category. Therefore, 250 respondents each were chosen from doctors, pharmacists, medical representatives and patients.

4. Validation of Data:

Validation of data was carried out by checking whether accurate samples were drawn as per the guidelines. The internal consistency of the data was measured using Cronbach's Alpha.

5. Data Interpretation and Analysis:

Various tools such as Mean, Standard Deviation, Analysis of Variance (ANOVA), and Factor Analysis were used for analysis.

Data Interpretation and Analysis:

1. Doctors Response:

The medical practitioners normally read medical literatures besides looking at the drug advertisements to update with the latest drug developments. They are generally rational and cautious while prescribing a medicine brand for a specific disease. Before prescription, they normally prefer listening to the patient's personal belief about their illness besides referring the published finding regarding efficacy of the medicine brand. They usually refer multiple sources of information to check the efficacy of the medicine brand. Sometimes, they refer to the other medical practitioners to consult about the medicine brand for a specific disease. They believe that relationship with the medical representatives and pharmacists not only helps them in deciding a preference set of medicine brands but also assure them about the efficacy of drugs. They sometimes compare the cost of medicine brands with same efficacy while prescribing for a specific disease. They prefer medicine brand of the drug companies, which offers regular gifts,

samples, and promotional schemes. The frequent visits by medical representatives and pharmacists help prescribers to fix pre-determined set of medicine brands for a specific disease.

2. Patients Response

Patients had a perception that the doctor whom they prefer for treatment, prescribe medicines for a fixed set of days with pre-determined set of medicines and advise them to visit again. They are not relying purely on the doctor's treatment but take medicines for the protection from further aggravation of disease. Patient's trust on the doctor increases if he/she behaves patiently and listens to their brief and writes medicines which are effective. They believe that the treatment cost is mainly because of the location and ambience of the place where doctor sits. Patients pay the prescription fee, as asked by the doctor, with an expectation that the prescribed medicines are effective and there is no other equally qualified or

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effective doctor near-by. Patients, after receiving the prescription slip from the doctor, sometimes inquire about the medicines from their
known pharmacist to get their opinion about the prescribed drug efficacy. They normally stick to the medicines prescribed by the doctor. Sometimes they do ask for the substitute medicines having same efficacy and relatively more cost effective, in case the prescribed one is not available with the known pharmacist.

3. Pharmacists Response:

Pharmacists normally keep substitute medicines or generic version of the original formulation with the same efficacy. They do this to carry a range of medicines for a specific disease. These generic medicines fetch better margins and sales volume to the pharmacist. They prefer those medicine brands which offer gifts, promotional schemes, trade discounts and relatively better margins while deciding on the range of medicine brands for a specific disease. Pharmacists meet the doctors, who sits near-by their store, to fix a set of medicine brands for a specific disease. Patients also, sometimes, do ask for a generic version of the prescribed medicine as they are relatively cheaper. Thus, pharmacists carry the regular prescribed medicines and their generic version. Pharmacists, while deciding on the purchase of the set of medicine brands for a specific
disease consider the specialty of the doctor, the preferences of doctor, the frequency of prescription slips that comes to their store counter and the medicines prescribed.

Pharmacists normally keep certain common products, apart from medicine brands, which help in increasing the frequency of visits of customers to their store. They carry the stock of medicine brands and non-drug items looking at their fast or slow moving trends. The stock level of the medicine brands for a specific disease is decided primarily based on their shelf life. Pharmacists regularly refer to the latest index of medicine brands listed in the Chemist Association Circulars to procure their stock of medicine brands for a specific disease.

4. Medical Representative's Response:

Medical representatives, who provide genuine information about their medicine brands and possess adequate knowledge, are more likely to receive doctor prescriptions for their set of medicine brands for a specific disease. Doctors, apart from the efficacy of the drug also look at their cost, while prescribing the medicine brands for a specific disease. Promotions, gifts, samples and other obligations offered by the drug company does influence the doctors in .their prescription behaviour. Frequency of visits of medical representative help in gaining trust of the doctor which, in turn, sets the final choice of medicine brands for prescription for a specific disease. Medical representatives visit doctors to insist them for prescribing their medicine brands for a specific disease and meet pharmacists regularly to push their stock of medicine brands in their store. Medical representatives visit their sales territories regularly to assist the sales team and monitor their performance.

Findings:

(Objective 1 and Objective 2)

1. This study supports the previous findings and suggests that the doctors normally prescribe a combination of both branded and generic drugs with the same efficacy for a specific disease.

2. This study proposed that the patients do look for both branded and generic medicines

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with the same efficacy for the treatment of a specific disease, to manage the cost of treatment.

3. This study suggests that the doctors while prescribing medicine brand for a specific disease, consider the combination of branded drug promotions from the medical representative, regular visits of the local pharmacists and inquiry from company's promotional ads and materials.

4. This study investigates that pharmacists while procuring the generic or branded medicine normally consider the preferences of the doctor nearby their store, the frequency of the prescriptions that they receive and the kind of preferences of patients that they receive.

(Objective 3):

This research work includes a review and critical synthesis of literature relevant to the buying behavioural pattern for branded or prescription medicines. Through an empirical investigation of the impact of generic drugs on the buying behavioural pattern and brand sustainability of branded drugs in Baramati, this research contributes to the overall knowledge of understanding the buying behaviour of branded or generic drugs and the factors that contribute to the buying behaviour pattern of branded drugs in Indian context. In addition, this research presents insight into the impact of generic drugs on buying behaviour of branded drugs, is worthy of consideration by academics, industry professionals and other key stakeholders.

Critical Insights from Literature review and focused group discussions with stakeholders:

A) In developed countries such as the US, only patented drugs are sold under a brand, which is marketed through their ties to doctors. Off-patent drugs are sold only as pure generic, without using any brand name. It helps in making pure generics cheaper. But in India, most of the generic drugs are sold as their brand name (brand generics) [11].

B) Commission on sales of brand name drug is much higher for everyone in the supply chain. Since the generics are priced considerably lower, the revenue earned by everyone in the supply chain is lower. So brand sellers in Baramati could prevent government's move to generics.

C) Despite stringent price control, big pharma companies manage to spend exorbitantly on marketing and branding of their drugs. Since advertisement of prescription medicines are not allowed in India, companies or medical representatives push their products through doctors, chemists and distributors in lieu of freebies, junkets and incentives [6].

D) In Baramati, Quality of generic drugs is not considered at par as brand name drugs. For obtaining quality standard of brand drugs, generic producers will have to invest in equipment and necessary approval process which may increase the cost of generic drugs.

E) Also, in developed countries like U.S., community pharmacists play an important role in dispensing medicines and hence their cost awareness becomes crucial [3]. But in Baramati, the concept of community pharmacists doesn't exist and hence the onus for cost reduction, from the point of view of drug selection, lies with the doctors and doctors have poor knowledge of cost of different brands. This can reduce sells of economic generic drugs.

F) If the doctor prescribes only a generic name, it will be left to the chemist to decide which particular brand to push. Further,

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Generic producers may supply with questionable quality in shortage unless government frame policy with appropriate penalties. Also, proposal of writing generic name in prescription will make difficult to prescribe combination drugs or drugs with multiple ingredients.

In addition to this, guidance of physician is required while patient switching to generic drugs from brand name drug with narrow therapeutic index (antiepileptics, antiarrhythmic, thyroid hormone, lithium, etc) [8]. Monitoring is also required for first couple of weeks afterwards. Some patients may have allergies or intolerances to excipients such as lactose, gluten, sulfites or tartrazine. Although the active ingredients are the same, the excipients (inactive ingredients) may differ. This is only important in rare cases when a patient has an allergy or sensitivity to one of the excipients.

In present scenario, Generic drug is looking best option for India but progressive changes require in mentality of Indian people to adopt this truth. Besides this, there is greater need for a harmonized drug regulation globally for overall growth of pharmaceutical sector. Major goal of patient care should be accessibility and availability of quality health care service and infrastructure. Incentive and tax relief to research are require to promote betterment of human health. Through use of cost effective and sustainable technology and methods, entrepreneurs must reduce the cost of drugs.

Recommendation and Discussion:

Most generic drugs sold in the retail pharmaceutical stores are branded, which come at a premium. But it should be noted that unbranded generic drugs are comparable to the branded drugs in the market. The quality depends on research, processing and manufacturing of the molecule. These generic drugs are as effective in treating the patients as the branded medicine, provided the necessary care is taken at the manufacturing stage to take care of product quality. If good quality manufacturing (GMP) practices is adhered to this could result in better affordability of pharmaceutical drugs to the common man.

In 2016, Medical Council of India (MCI) released guidelines to physicians to prescribe drugs to patient by their generic names only and to avoid mention of branded names in the prescription. The medical community is asked to follow MCI's 2016 notification in which it had amended clause 1.5 of the Indian Medical Council (Professional Conduct, Etiquette and Ethics) Regulations, 2002, in this regard. It states that every physician should prescribe drugs with their generic names only. Those found violating this clause, suitable disciplinary action by MCI would be undertaken against that individual. All the registered medical practitioners under the IMC Act are directed to comply with the aforesaid provisions of the regulations without fail," said the MCI circular as quoted by PTI. But for various vested reasons this is rarely followed in practice [2].

Doctors continue to prescribe branded medicines to the patients without any second thought. This turns the table towards the emerging upliftment of fake and deleterious drugs in the market. Doctors prescribe it to improve their business and to maintain their tie-up with these brand holders. Due to lack of transparency in the licensing procedures of Drugs, it has resulted in the increased supply of low quality, spurious and substandard drugs. With reference to a WHO study, Mashelkar Committee has declared the data that nearly 30% drugs in Indian

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market are spurious, substandard, counterfeit drugs. Although there are various bodies present but their actual implementation to maintain the quality of drugs is not sufficient as government is itself coming up with data like there are 8-10% substandard drugs and 0.3 to 0.5% spurious drugs in the Indian market [4].

However it should be taken note that despite being the third largest pharma market (in terms of volume) in the world the regulatory bodies set up to implement the laws related to drug production are not functioning effectively. If this can be done and all manufacturers comply with GMP/ICH norms, India can ensure that its generic drugs will be of similar quality as the branded drugs. India can borrow from China in implementing such an approach [6].

In rural areas of India viz. Baramati; the fact that even if doctor does prescribes a generic drug, the pharmacist without regard to the cost impact on the patient, sells only branded medicines, as these are more lucrative. This practice hits at the very root of the aim to make medical care affordable to all strata of the society. This relates to the fact that prescribing the generic drugs by doctors will merely shift the focus of the pharmaceutical industry's unethical drug promotion to the pharmacist, away from the prescriber. This will again result in the spread of business and false commissions.

Pharmacists in Baramati seem to be unhappy with the unavailability of appropriate generic names equivalents of branded medicines sold in the market. Nearly 90 percent of the Indian pharmaceutical market is faces this issue where more than 1,00,000 crore drugs are there [9]. Add on to this issue, the problem of naming a fixed dose combination (FDC) - when two or more Active Pharmaceutical Ingredients (API) are combined to form a single dosage form or drug, it results in the formation of Fixed-Dose combination (FDC) which is manufactured, dispensed and distributed in the fixed doses [4]. There are many FDC drugs and innumerable brand names for same purpose FDCs. Further complications arise when FDCs have more than two APIs which in some cases goes up to 8 or 9 APIs. To prescribe a generic name for each of the eight or nine ingredients is a very tedious and impractical task.

Conclusion:

This study attempted to analyze various factors that motivate the prescription behaviour of the medical practitioners and measure the impact of generic drugs on the buying behaviour pattern of branded drugs; and the benefits offered by them to the society. During the course of this study, some areas had been identified, which offer scope for the further meaningful research that may stress upon the complexities of brand positioning of branded drugs and its impact on the prescription behaviour of medical practitioners. Indian Pharmaceutical industry is worldwide famous for its export of generic pharma products. After China, India is the second largest producer of generic drugs. We have good production of them but still there are so many issues and challenges due to which Indian population is still struggling to find out the generic medication easily accessible to them. Even doctors are not prescribing generic drugs. There are few government regulatory bodies which take care of the availability of the generic medicines and try to make them available to the Indian population especially to the ones who are below poverty line.

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6. India's Five Trillion Economy Vs. China's Vision 2025

A Game of Relativity

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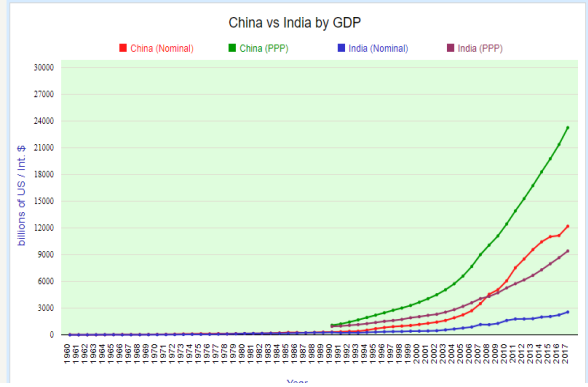
Introduction: It is difficult predict to future. And more than the scientists working in the physical sciences, the task is more difficult for the social scientists. Because they are not well equipped to predict the events in the economy as it is a very dynamic entity. There have been many events in the recent past where the imminent economic catastrophes could not be prevented- Sub Prime Crisis in USA and PIGS Sovereign Debt Crisis in European Union. And off the all economies around the World, it's really tough to predict China. On this backdrop, this paper is an attempt to compare the past, present and expected future of two economies which are poised to become the largest in the world by 2030 in PPP terms.

Where the race started?

At the global stage, most suitable country for comparison with India in terms of demographics, history of liberalization, future competition is China. And it is aptly compared with China every time. Hence, when Modi Government unveiled its plans of 5 Trillion Economy, the author felt it necessary to cross check it with the plans of its counterpart. Because growth is a relative concept. And the game of relativity between these two engines of global economy will play a crucial role in shaping the 21st century.

The Past

Both countries got rid of colonial past around same time, India in 1947 and China in 1949. Even till the late 1990s the divergence between India and China in terms of Per Capita Income was very negligible. Nominal and PPP Per Capita of both countries coincided with each other till 1990.



Source: World Bank

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As the graph from the World Bank Data given above shows that till late 1990s both countries were almost equal and their Nominal as well as PPP per capita coincided with each other. But the gap between the PCI has widened since then and China's Nominal dollar based PCI is 4.61 times higher than India and in PPP terms China's PCI is higher than 2.30 times that of India. Even in terms of GDP both countries were almost equal in 1987 but in 2019 China's Nominal GDP is 4.78 times greater than India. And in PPP terms its GDP is 2.38 times greater than India.

India and China are held as the most promising emerging economies of the world that will propel the growth of the global economy during the current century. Already by 2019, China is First and India is the third largest economy by PPP terms. Both countries together clock more than 50% of Asia's GDP.

Human Development Indicators:

Though both the countries have same population, their Human Development Indicators have been at a distance from long ago. Though the Mao's Great Leap Forward and Cultural Revolution failed on many counts, but they had uplifted the human development in China. This human capital helped China capitalize once it got converted into market driven economy under Deng's regime in 1978.

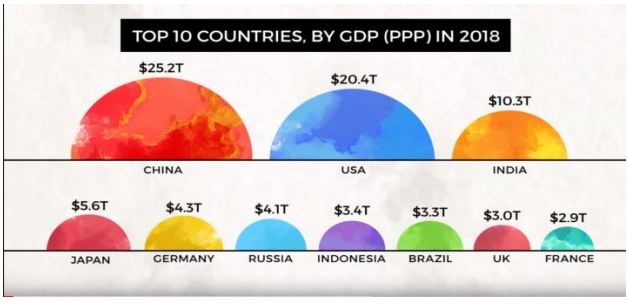
Values of Human Development Index

Country	1990	2000	2010	2018	Rank in 2019 HDR
India	0.43	0.49	0.58	0.64	129
China	0.50	0.59	0.70	0.75	85

Source: http://hdr.undp.org

One of the major reasons why China has done excellent on the economic growth front is its progressive record on Human Development front. Due to its concentrated efforts China has always been far ahead of India on every parameter of Human Development. A look at the table above shows that in 2019 India's rank was 129 while that of China was 85.

The Present



Graphic by: Visual Graphics

As the graphic above shows that India is currently the third largest economy by PPP

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while China is first. This shows that in future, both China and India are going to stake their claim on global political and financial institutions. This is likely to challenge the Unipolar world under the American Supremacy. World has to readjust to the new realities and that transition is not going to be smooth.

In India's famous 'Panchatantra' fables, there is a race between Tortoise and the Rabbit. But that's an old story. We are witnessing a new race. This unmentioned race between the Elephant and the Dragon has never been the talk of town because China doesn't reckon India as its competitor neither India appears to be in any position to assert its role as an alternative to China. Though the presence of India is being felt at the global stage due to the assertive efforts of the Modi Government. Differences in Economic Models of China and India.

Authoritarian vs. Democratic State

China and India both have followed different models. China represents a market based economy Led by an Authoritarian State while India after 1991 reforms is a market oriented economy with strong presence of the Public Sector. Chinese Model has achieved success on a sustained basis and it is almost sure that it will succeed in future as well. While Indian model has also succeeded but its run hasn't been smooth. Some of the critics have argued that the authoritarian rule in China has resorted to distortion of market policies for giving undue advantage to its domestic producers. For example, keeping Yuan undervalued making foreign goods costlier for domestic consumers.

Beating the goal posts

China has displayed a very rare quality during its Long March towards Supremacy in economic spheres. Its policy makers and implementing authorities have taken up a habit of beating the goal posts. Let's look at a data set.

Agency	**Year when China would overtake US as the largest economy**
Goldman Sach (2003)	**2050**
Goldman Sach (2009)	**2027**
Japanese Cabinet Research Office	**2025**
Actual	**2019 (Chinese GDP in PPP terms)**

Chinese authorities seem to work very decisively towards achievement of targets is it is Three Gorges Dam, OBOR Initiative.

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Whereas Indian policy making is sullied with terms such as Policy Paralysis. India has missed deadline on various occasions be it growth rate, growth of foreign trade or investment. Many of the ambitious projects have completed only half run in India. For example, Smart Cities Mission, Namami Gange, Swatcha Bharat. But still India seems to be improving its performance but it is way short of China when it comes to finishing the task on time.

Ease of Doing Business

India was at the 142 position in the Ease of Doing Business in 2014 while China was at the 83rd position. The most recent Doing Business 2020 Report is out and it shows that while China has improved its rank to 31st place. Thanks to the reforms of the Modi Government India too has been significantly successful in improved its ranks to 63rd place. Though, it fell short of the government's target of reaching the First 50 Club.

Difference in words and actions- Export Led Growth

When Li Peng, Chinese Premiere visited India in P V Narsimharao's era both countries were at around the same trajectory. For both the countries their per capita was amongst lowest in the world, FDI was nonexistent in early 1990s. India too accepted the Export Led Growth model instead of Import Substitution model that it had followed since 1956. That LPG model is discussed a lot in words in India but it was China who exercised that model in its true 'Spirit'. Chinese authorities believe not in walking the talk but in completing the walk before the talk. China is way ahead of India when it comes to reforms and support to industries.

Difference in Focus- Industry vs. Service

China has focused on Industry (Relative Labour Intensive) and India's GDP derives its largest chunk from Services (which gives birth). Let's have a look at the Sectoral composition of GDP.

Sectoral Composition of GDP (2017)		
Sector	China	India
Agriculture	8.3	15.4
Industry	39.5	23.1
Service	52.2	61.5
Source: CIA Fact book		

Source: CIA Fact book

And the way it is said, that the statistics hide more than they reveal. This data is misleading. Because though Services is the largest contributor of GDP in both the countries but the real difference lays the industries. Industry contributes 39.5% for

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China and for India the contribution of Industry is just 23.1%. Besides the 39.5% of China's GDP is a much larger figure than 23.1% of India's GDP which 4.26 times smaller than China. That's why India's growth is sometimes called as 'Jobless Growth' and its focus on Services is said to be 'Genesis of Inequality'. China is rightly labeled as the Worlds Manufacturing Hub. While India's Make In India is in its nascent stage. Even in most of the agriculture commodities, China is in the first three largest producers, though India is also quite close. China's Industrial Production is so huge that it is the leading producer of almost all types of consumer electronics and a host of other Industrial goods. China's vision document is also likely to take Manufacturing to the next level of automation which evident from its title: Vision 2025: Made In China.

The Future- Made in China versus 5 Trillion Dollar Economy

Made in China: Vision 2025

Made in China: Vision 2025 is a Vision Document released by Ministry of Industry and Information Technology in May 2015 by China which presents a complete architectural plan of 'How' China seeks to transform itself from a low end manufacturer to becoming a high end producer of goods by 2025. This vision is similar with the 'Industry 4.0' released by Germany.

With this 'Made in China 2025' (MIC 2025), it wants to focus its manufacturing towards its wealthy domestic consumers as well as entering into high end goods and equipment global market which has been the monopoly of the developed nations of the West. This huge makeover is carefully designed and now in 2020, many of its outcomes are visible too. The Vision 2025 requires huge investment in Research and Development and technological innovations. The MIC 2025 pushes for leadership in Information Technology, Robotics, Artificial Intelligence, Clean Energy etc.

Key Industries of the Made in China 2025	
Industry sector	**Description**
Information Technology	AI, IoT, Smart Appliances
Robotics	AI, machine learning
Green Energy and Green Vehicles	Energy Efficiency, Electric Vehicles
Aerospace Equipment	Manufacturing Jets

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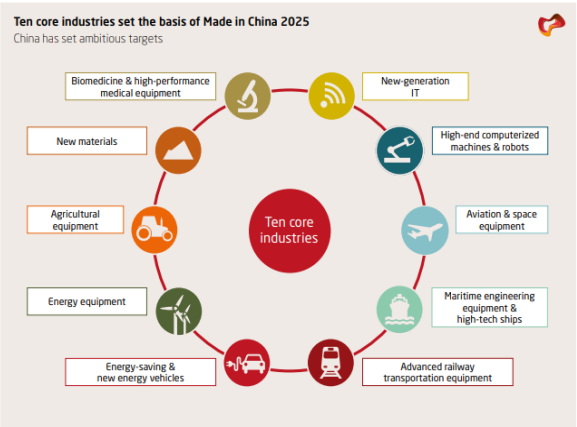
Ocean Engineering and High Tech Ships	Maritime Engineering
Railway Equipment	High Speed Train infrastructure
Power Equipment	Electrical Power Equipment
New Materials	Nano materials
Medicine and Medical Devices	Bio Medicines & High End Medical Apparatus
Agriculture Machinery	Agricultural Equipment



Some of the visible outcomes of the MIC 2025

As part of MIC 2025 and to overcome China's slowing economy, the Chinese Authorities have propelled the economy with a series of infrastructure projects.

i. Railways: The China currently has the largest High Speed Railway Network. To be more true currently it is home to two third of the entire Worlds High Speed Railway Network. A huge amount of investments and physical progress is already underway.

ii. Canal Network: China is working on the World's Most ambitions multi decade Infrastructure Mega Project which is known as the South to North Water Diversion Project. Under this project, China is diverting its water from water abundant South to water scares North Region.

iii. Airports: Building world's largest Airport was one of the objectives under the MIC 2025 and continuing with its target-result approach, China has completed the construction of this 'Starfish' shaped Airport. stands commissioned for operation on 25 September, 2019.

iv. Demographic Relocation: During the MIC 2025 China is hoping to relocate 250 million people in China's upcoming Mega cities. World's

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largest urban conglomerate is being built around its capital where China is building its 'Jing-Jin-Jib' City.

v. Renewable Energy: World's Largest Wind Farm is nearing its completion. Though the world is shying away from Nuclear Power, China is constructing the

vi. More Nuclear Power Projects to power up its future electric vehicles and to go green to reduce its carbon footprints.

vii. Other Projects
World's Largest Undersea Tunnel
World's Largest Solar Farm
Building Mega Bridges

Why is developed World worried about Made in China 2025?

The history of Modern China exhibits that China has outperformed every target that it has set for itself. Earlier too it has talked of making investments in hi tech manufacturing. But MIC 2025 is going to be a different game. Now China has set targets to not only gain manufacturing but also it intends to gain know-how and also to increase domestic content of core component and materials. The target for domestic content is 40% by 2020 and 70% by 2025. Unlike other nations, the Chinese Vision is supported expansively by the Government, directly and indirectly.

Already the National Integrated Circuit Technologies Funds or 'IC Fund' is helping Chinese companies to acquire high end companies in US and Europe. China aims self-sufficiency for domestic companies to compete in high end technology market with the 'Semi-Conductor Revolution.' But the foreign investors in China are worried about creation of unfair playing field for the domestic companies in China. And once China is able to test the success in domestic market it will have knock on effect in other markets through the expansion of Chinese companies abroad. Global giants are not only worried about this but the real worry lies elsewhere. Much of the technological insertions that China is making have civilian as well as military use. This is the real cause of concern for the USA.

India's 5 Trillion Dollar Plan

The Department of Industrial Policy and Promotion of Ministry of Commerce 'A working group on USD 5 Trillion Dollar Economy' has suggested a blueprint of long and short term measures to increase the size of Indian Economy from the present USD 2.9 Trillion to USD 5 trillion by 2025. The group has suggested a number of strategic

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interventions for accelerating the rate of growth

Strategy:

i. Encouraging public and private investments to develop infrastructure like cold chains;
ii. Special attention for north-eastern, eastern and rain-fed states
iii. Augmenting scope of access to institutional credit
iv. Rationalization and targeting of input subsidies towards small and marginal farmers
v. Reform in land leasing laws to promote land consolidation and contract farming
vi. Accelerating the pace of public investment in agriculture
vii. Ensuring greater efficiency in capital use.
viii. Focus on existing high impact and emerging sectors as well as MSMEs. For Example, Defense sector- there is a need to identify key components and systems and encourage global leaders to set up manufacturing base in India and ensure that short term incentives result in technology/process transfer.
ix. To boost electronics manufacturing, additional fiscal incentives such as a limited-period tax holiday
x. For the auto and auto-components sector, encouraging global leaders to set up manufacturing bases, and incentivizing players willing to invest more than a threshold in identified areas.
xi. Measures to boost manufacturing in aeronautical, space, garments, and organic/Ayurveda products besides emerging areas such as biotechnology, electric mobility, unmanned aerial vehicles, medical devices, robotics and chemicals.
xii. For micro, small and medium enterprises, need to improve access to funding by developing of SME credit risk databases, SME credit rating, and creation of community-based funds.

Measures:

i. Focusing on champion service sectors like IT, Tourism, Medical Tourism
ii. Improving rail connectivity and seamless connectivity to major attractions; facilitating visa regime for medical travel;

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iii. Allowing expatriate professional to perform surgeries in identified hospitals;
iv. E-commerce policy and regulatory framework for logistics segment
v. To promote growth of accounting and financial services, it pitched for promoting FDI in domestic accounting and auditing sector, transparent regulatory framework, and easing restriction on client base in the accounting and auditing sector.
vi. To push audio visual services, the report recommended measures like exploring introduction of insurance in the film industry, promoting private investments in film schools, exploring franchise business models to exploit film franchise, and promoting gaming industry value chains.
vii. It added that the scope for expansion into advisory, arbitration and mediation services is large and unexplored.

This suggests that a slew of reforms would be declared on the lines of this report in the forthcoming budget 2020-21. This year is going to be a year of Big Ticket reforms likes 1991 LPG Policy. Whereas the 1991 reforms were largely related to Industrial policy, these 2020 Reforms will be overarching to all the sectors of the economy.

Feasibility of 5 Trillion Economies

The According to India's Principal Economic Advisor (and also the Chief Architect of the 5 Trillion Economy), Santee Sanyal, to achieve the Five Trillion Dollar mark India must grow at 11.5% per annum in nominal terms which after adjustment with the inflation to the tune of 4 to 4.5% translates to 8% growth in real output or GDP at constant prices. If we are able to do that then the Incremental Growth Rate of 8 to 8.5% of the target would take us to the target of 5 Trillion Dollar Economy by 2025.

Considering that GDP (at Constant Prices) growth has slowed down significantly since 2015-16 and it has reached to 4.5% in FY20, the 8.5% target too seems a little difficult. But according to the Chief Economic Advisor, KV Subramanian, the slowdown is cyclical in nature and all the major fundamentals of the economy are still strong and Indian Economy is likely to bounce back in the First quarter of the next financial year 2020-21. According to Subramanian, there is no denial of the slowdown. But a lot of reforms are going on and there is a well-thought agenda behind reforms such as Corporate Tax Cut, Code on Wages and

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Industrial Relations, Direct Tax Code. These reforms are definitely going to create a more favorable environment for investment. This new investment for which the Effective Corporate Tax is just 15% (one of the lowest in the world) is definitely going to take place and that will help in gliding past the cyclical slow down. Coupled with the India's improved ranking in the Ease of Doing Business there seems to be some merit in the argument. Even if we assume this to be true but the real question is whether 5 Trillion is Enough?

Is 5 Trillion enough to progress in relative terms with China?

If at all India aspires to compete with China, it has to declare the race with China. Then only we would be able to accelerate the growth rate so that the difference between the two economics would be minimized. According to the IMF projections, by 2025.

The projections by the various agencies show that India is poised to become the second largest economy after the China by the year 2030. It is going to be a great leap for India to overtake US in PPP terms. But it is not a result of conscious efforts in case of India, but that is not the case with China. China's Vision 2025 is a carefully drafted document with verifiable physical output targets which are difficult to achieve. Whereas India's 5 Trillion Economy document is vague in terms of strategic steps required to achieve the target.

Projections by IMF

Year	Nominal GDP (billions $)		PPP GDP (billions Int. $)		Nominal GDP capita ($)		PPP GDP capita (Int. $)		Growth (%)	
	China	India	China	India	China	India	China	India	China	India
2019	14,216.50	2,972.00	27,331.17	11,468.02	10,153	2,189	19,520	8,454	6.267	7.257
2020	15,468.10	3,257.72	29,609.09	12,584.23	11,014	2,379	21,082	9,189	6.119	7.409
2021	16,806.50	3,577.32	32,038.09	13,840.08	11,955	2,578	22,752	9,974	6.000	7.740
2022	18,206.85	3,924.11	34,581.36	15,218.52	12,900	2,781	24,503	10,825	5.750	7.731
2023	19,713.52	4,306.29	37,274.68	16,736.53	13,970	3,023	26,414	11,750	5.600	7.742
2024	21,309.50	4,729.32	40,147.77	18,408.85	15,102	3,277	28,453	12,757	5.500	7.757

Graphic by: Visual Graphics

The IMF Projections show that even if India grows by 7.7% and if China maintains its growth rate of 6.2% and even if its growth decelerates to 5.5% till 2024, its GDP would be 21.30 Trillion USD and India's GDP would be 4.7 Trillion USD. India would be close to its target of achieving its target of 5 Trillion USD by 2025. But Per Capita Income is better than GDP figures in explaining the distribution and standard of living that people can expect with the

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progress of the economy. India's GDP Per Capita in nominal terms would be $3277 and China's would be $15102. China's Per capita in 2024 would be 4.60 times greater than India while it is 4.61 times greater than India at present in 2019. There would be negligible improvement for India, in difference in their per capita income as compared to China.

Concluding remarks:

i. India is shying away from taking head on fight with China to declare its arrival at the global stage.
ii. India's Five Trillion USD Economy plan, even if its target is achieved, its targeted growth rate falls way short of bridging gap between China and India. More than India, China is likely to succeed in its Vision 2025 and at that time this gap would be larger.
iii. China's MIC Vision 2025 aims to transform itself into a manufacturing hub of high tech goods. With this programme China wants to gives accomplish its ambition of becoming a super power with Geo-politically significant programmes while India's thinking and planning seems to be still complacent with being a regional power.
iv. India's planning and strategy is vague as compared to China which is exhibited by limited success of many of its flagship programmes like Smart Cities Mission, Swatch Bharat etc.
v. China has focused hard on Hard Infrastructure whereas India is still struggling with Bank NPAs, Bullet Train, and Industrial Corridor etc.
vi. India's democratic set up is diverting its attention from economic firefighting to murkier issues like Article 370 and Jammu And Kashmir Problem, Ayodhya Dispute and NRC and Citizenship Amendment Bill.
vii. And last, if India wants to have any meaningful place in the coming decades on the global stage, it has to present itself as an alternate to China. The World is skeptical about China's intentions but it would definitely prefer to have a Benign Super Power like India balance China. Let's hope the post 2030 would be the era of Asian Super Powers and India claims its place in the global economy.

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7. Export Oriented Agriculture: A Road Map to Doubling farmers Income

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Abstract:

Since Independence, agriculture has received importance at checkered degrees from the policy makers at India. If it was self-sufficiency in the early formative years of planned economy, high yielding varieties; scientific farm practices assumed paramount importance during the green revolution years. Export of farm produce has received significant attention from India's policymakers in the recent years. Yet, the various government agencies mandated with the task of export promotion — whether the Agricultural and Processed Food Products Export Development Authority (APEDA), Marine Products Exports Development Authority (MPEDA) or the Spices, Tea and Coffee boards — have showcased little by way of actual achievement.

The present article attempts to examine various causes and possible remedies to rectify the systemic anomalies in this regard.

Key words: Integration, Doubling farmers' income, Exports, Testing Infrastructure, Fruits & Vegetables.

Many agronomists and academicians may be influenced by the spectacular growth of Indian agricultural exports ($ 7.5 billion to $ 43.25 billion between 2003-04 and 2013-14). The global commodity boom was the reason for the growth and not the excellent policy initiatives as one may infer. The fact that exports fell to $ 33.7 billion by 2016-17 (end of the boom), before recovering somewhat to $ 39.2 billion in 2018-19, endorses the authors claims. The occasional spike in shipments of certain produce has often been short-lived primarily because of the peculiar nature of the demand for that commodity — for instance, that of guar-gum from the US shale gas and oil industry.

The precarious situation of Indian farm sector creates lots of self-doubt around the goal $ 5 Trillion Economy by 2025. For instance, are we on track of Doubling of farmers' incomes by 2022? Can the upheaval task imaginable without creating conducive atmosphere for agriculture exports? There are enough evidences world over to support the statement that, developing a robust and sustained market for our farm exports is the only way we can enhance the farmers income.

The author suggests some concrete measures which may contribute to a much required export push for Indian farm produce:

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1. **Integration of Stakeholders:** We need to shed away the prevailing bureaucratic approach towards agriculture exports. A single, empowered agriculture export promotion authority with a visionary leadership must replace the present clutter of too many institutions. Government must initiate national programs and policies to boost agriculture export. Since agriculture in India is a state subject, state governments must take into confidence and consultation. Industry & trade associations and recent agricultural counselors deployed across countries must be part of the game plan. Managing market intelligence, translating it to demand for Indian farm produce, and devising strategies for multilateral/bilateral dispute settlement and trade-related matters can change the scenario. Eliminate completely the political indulgence and empower industry to control commodity boards and agencies. All India Rice Exporters' Association and the Maharashtra State Grapes Growers Association are the the shining cases of autonomy in this regard.
2. **Testing infrastructure:** Agricultural export products are subjected to sanitary (human and animal health-related) and phytosanitary (plant health) checks. The very rigorous safety regulations often demanded on produce from importing countries include their originating from certified disease-free areas and adhering to prescribed standards pertaining to pesticide MRLs (maximum residue limits), use of permissible additives, and special treatment in processing. Strict compliance with these standards is paramount for fresh fruits, vegetables, and other agri produce in order to avoid rejections and develop confidence of trading partners.

This NRL has been crucial to enabling export of fresh grapes from India, which was valued at $ 334.78 million (Rs 2,335.25 crore) in 2018-19 alone. If India is to double its agricultural exports, there should be at least four such NRLs, one for each region, dedicated to the testing of exportable produce. Each NRL can cater to the requirements of units in all the agri export clusters of the particular region. These could be complemented by the creation of large-scale processing and pack-house facilities adjacent to inland dry depots or designated airports having export cargo handling infrastructure. A recently established integrated agri export hub at Varanasi, with a supply chain linking four farmer producer organizations (FPO) in the region with the Mumbai-based Vafa Fresh Vegetables & Fruits Exporters Association, is a model

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worth replicating across different agri clusters.

3. **Focus on Fresh Fruits & Vegetables:** A big chunk of India's agri exports now comprises cereals (basmati and non-basmati rice), meat and marine products. We have hardly exploited the huge potential for export of fresh and processed fruits & vegetables (F&V), which can be a game-changer in meeting the goal of doubling farmers' incomes. This is even more so, given that F&V is produced mostly by smallholders across a very diverse portfolio and spread over a vast geography. Recent policy interventions with regard to the adoption of a model Agricultural Produce and Livestock Marketing Act, e-NAM (electronic-National Agricultural Market), FPOs and the Varanasi agri export hub model can go some way in overcoming the bottleneck of aggregation, processing and packaging of produce for the export market.

Additionally, the government should emphasize on registration, standardization and promotion of specialty products with proper GI (geographical indication) protection. Today, we have Darjeeling tea, which is the only such protected GI product in the European Union market. As of 2019, the Indian government has issued 322 GI tags under the Geographical Indications of Goods (Registration and Protection) Act, 1999, which includes 120 food items. What stops us from unlocking an exclusive export market for Indian GI-protected agri-products? Doing this even for a dozen of the 120 protected produce can be an excellent beginning.

In summary, creating a single apex authority for promoting agricultural exports, encouraging exporters to use the e-NAM platform for sourcing export-quality produce, engaging FPOs in aggregation and linking them with exporters, and establishing robust infrastructure, including NRLs, at identified agri-export hubs are some of our critical asks. State and Central Governments may think to form a consortium of enthusiasts from the Finance Ministry and Commerce & Industry Ministry, who can work in the form of a taskforce to implement the above-cited measures which will spearhead the twin objectives of doubling agricultural exports and farm incomes by 2022.

The author is compelled recount the vigor and intensity with which Green Revolution and Operation Flood were rolled out in India. If we have a handful of Swaminathans and Varghess who can lead our confused policy makers and disgruntled farming community, we may double the farmers income for sure, and may be shall

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go beyond to become the food basket of the world, in future.

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8. Software Economics: A Roadmap for Software Product Development

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Abstract: In the Information technology sector software is the medium through which economy expresses itself with a strong performance of all economic variables In software development process Software economics is an investigation area that deals with the challenging issue of valuing software and estimating the costs involved in its production. Software economics deals with the software cost estimation models which considers process of function points, gathering and analyzing data Software Metrics, Source line of code (SLOC) etc. Software development deals with technical parameters while software economics focus on value creation by investment. Development process passes through the number of stages for better results. An economic objectives and constraints consideration leads Software engineering to provide more advanced capabilities to take major software decisions in economic terms. Software cost models considered size, process, personnel, environment, and required quality for development. Software economics basic goal is to develop fundamental knowledge for value creation by enabling significant, software and information technology projects, products, for the industry.

Keywords: Software engineering, Value Creation, SLOC

1. Introduction

Information technology zone is one of the most rapidly growing sectors. Software development process may be the largest single asset of the world. Software represents the core of most modern organizations, most products and most services. Operating, maintaining and creating software is the largest class of expenses than direct manpower cost. Software is the medium through which information technology (IT) expresses itself on the economy and with a relatively strong performance across all economic variables. The IT sector contributes directly to economic performance because of its dynamism, and software applications help lift growth across the whole economy through their use in an ever-expanding array of applications. Rapid growth in the sector is evident in terms of value added, employment, wages, Research and Development intensity, patents and investment. Software is becoming increasingly difficult to create, develop, durable to maintain

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but it enables data analysis and variety of application domains. In principle

Software engineering is a fundamental decision-making activity of software development process which focuses over time with limited resources and usually in the face of significant challenges or uncertainties. In software development process crucial challenge leads to system failure and inaccurate estimation. Due to the inadequacy of economic and business information software projects may be at risk. Software economics is an investigation area that deals with the challenging issue of valuing software and estimating the costs involved in its production. Software economics is a need for not only better cost estimation models but also stronger techniques for analyzing benefits.

2. Scope of the Study

Software economics is the study of how common project resources are allocated for software projects. Software economics helps software managers allocate those resources in the most efficient manner. The process of counting function points, gathering data, analyzing data is commonly referred to as Software Metrics, but in reality is a branch of economics which should be called Software Economics. As the size of software projects increase the unit cost (or average cost) rises. In all software projects there are some basic principles which cause diseconomies of scale. That is:

i. There are low fixed costs relative to variable costs
ii. Communication becomes difficult as project becomes larger
iii. Multiple logical paths grow in a nonlinear manner as size increases
iv. Interrelationships of functions grow geometrically as project becomes large.

3. The Need for Research

Software development involves the investment of valuable resources. The goal of central to all aspects of doing business is maximal value creation by investing in software. Software designers, engineers, and managers must begin to understand and reason systematically and effectively about the connections between software design decisions and value maximization objectives. But usually software engineers are usually not involved in enterprise-level value creation objectives. The connections between technical parameters and value creation are understood unclearly. There is lack of adequate frameworks for modeling, measuring and analyzing the connections between technical decisions and value creation. There is hardly any analysis can be done that how software engineering

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investments at the technical level contribute to value creation. At the end, technical criteria tend to be applied in ways that are not connected to, and finally not optimal for, value creation. Software economics is situated at intersection of information economics and software design and engineering. It is concerned with improving the value created by investments in the development and use of software. The goal is to understand the relationships between economic objectives, constraints, and conditions, and technical software issues, and then to interrelate this understanding to improve software productivity.

4. Objectives

The purpose of this paper is to study the critical success factors, metrics, and tools and techniques for technical product development process majorly considering economic feasibility for each stage of the new product development process.

5. Methodology/ Approach:

To achieve this objective, a literature review was undertaken to studies on New Product Development process, research challenges and software economics policy and how it can be achieved. These studies were scanned for common factors for organizations that considered for launching of new products in the market.

Software engineering techniques enable software developers to build more valuable software.

Software economics is the sub-field of software engineering that try to find improvements which enable software engineers work more effectively about important economic aspects of software development, including cost, benefit, risk, opportunity, uncertainty, incomplete knowledge and the value of additional information.

A software product development is formation of a market opportunity into application development product available for sale. There are common perspectives in the design and development research are marketing, organizations, engineering design, and operations management. As a deliberate business process perspective of product development involving hundreds of decisions, many of which can be usefully supported by knowledge and tools. Initial process is started with feasibility analysis which covers prior reviews of the literature; examine the importance of environmental and contextual variables, market growth rate, the competitive environment, or the level of top-management

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support. The software engineering activity centers on decision making in very complex situations. Economics is "the study of how people make decisions in resource limited situations." An important problem is to empower high level managers to choose the best available economic reasoning techniques for use in their projects.

Booz, Allen and Hamilton (1982) found that companies that have successfully launched formal new products development process and those them generally pass through the number of stages.

The stages of the model are as follows:

i. New Product Strategy: It links the new product development process to company objectives and provides focus for idea/concept generation and guidelines for establishing screening criteria.
ii. Idea generation: It searches for product ideas that meet company objectives.
iii. Screening: It comprises of an initial analysis to determine which ideas are pertinent and merit more detailed study.
iv. Business Analysis: Further evaluates the ideas on the basis of quantitative factors, such as profits, Return-on-investment (ROI), and sales volume.
v. Development: Turns an idea on paper into a product that is demonstrable and producible.
vi. Testing: Conducts commercial experiments necessary to verify earlier business judgments.
vii. Commercialization: Launches products.

6. Trends / Emphasis of Software Economics in Development Process

New product development process is the critical challenge for organizations. Many organizations are aware of the major role new products must play in their future and search for success. Organizations are constantly searching for ways to revitalize, restructure and redesign their new product development process practices and processes for better results. Software engineering researchers and practitioners are beginning to appreciate the need to provide more advanced capabilities to take major software decisions in economic terms. Economic objectives and constraints considerations lead almost all software development. New software development techniques demand new estimation methods. Currently Software engineering that is not formulated deeply in terms of economics, value, or utility. Most software design principles provide guidance that is indirectly

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economic in its nature, but that guidance is not clearly economic in formulation.

There are the major factors of software economics are considered for new product development process as software cost schedule estimation and software decision support.

The major software cost and schedule estimation techniques commonly used are expertise-based, model-based, regression-based, composite-Bayesian, learning-oriented, and dynamics-based etc. Software decision support challenges in terms of the categorization of decision issues into strategic, operational and tactical decision issues which are interrelated and cost evolving implementation.

Most software cost models can be diverted into parameters: size, process, personnel, environment, and required quality.

1. The size of the end product is measured in Source Line of Code or Source Instructions. It is the number of function points metric required to develop the required functionality.
2. The process is the combinations of different methods and techniques used to produce the software end product.
3. The software engineering personnel are the team and particularly their capabilities and experience with the computer science issues and the applications domain issues of the project.
4. The environment is made up of the tools and techniques available to support efficient software development and to automate the process of different software and hardware for the process.
5. The required quality of the product, comprising its features, performance, reliability, maintainability, portability and adaptability.

The relationships among these parameters and the estimated cost can be written as follows:

Effort = (Personnel) X (Environment) X (Quality) X (Size) X (Process)

A number of parametric models have been developed to estimate software costs; all of them can be generally abstracted into above form. Important aspect of software economics is that the relationship between effort and size exhibits a diseconomy of scale. The diseconomy of scale of software development is a result of the process exponent being greater than 1.0. Contrary to most manufacturing processes, the more software builds, the more expensive it is per unit item.

6.1 Economics of Software

A good economic model of software suggests the declining costs for change into productivity

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and quality improvements. In economics of software, period expense can be managed. Account for software is a balance sheet in which transaction adding both assets and liabilities. In reality value of software are considered with different phases. Firstly Programming costs are usually less than 10 percent of the total system costs. The systems designs are intangible assets because value grows and analysts with the operations and projections for the future development. The next phase of implementation is also an intangible asset of possibly huge value, to make design work valid, reliable and verified but it is also a liability for maintenance and evolved for suitable changes over a period of time. Over a time and the requirements the costs of maintenance, modification or updating is increase with the amount of added proportion change. On an average any new software product application has a useful life of 5 to 10 years after certain interval it goes through the updating, modification or replacement. This is because of two services either added change or a new evolution of technology.

6.2 Pragmatic Software Cost Estimation

Software Engineering Economics contained a summary of the major concepts and techniques of microeconomics (production functions, economies of scale, net value, marginal analysis, present value, statistical decision theory), with examples and techniques for applying them to software

Decision situations. Software cost estimation is a critical studied point because that used an iterative development approach. Estimation should be based on several methods and actions. It should be taken to find out more accurate estimates pricing to win the only applicable method. But in Software development model, it is difficult to control on application size, SLOC, inconsistent function points, metrics and it is extremely difficult to homogenize data across different organizations with different processes, languages, domains, and so on. As there is several popular cost estimation models (such as COCOMO, CHECKPOINT, ESTIMACS, Knowledge Plan, Price-S, ProQMS, SEER, SLIM, SOFTCOST, and SPQR/20) available by considering different approaches like organizations histories, experiences, processes, tools, etc.

Mainly popular cost estimation model used are considering the main objectives are Source lines of code (SLOC) and Function Points (FP). For this approaches may be used top-down or bottom-up.

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1. Top-down approach – It starts at the system level and assess the overall system functionality and this is delivered through sub-systems. It takes into account costs such as integration, configuration management and documentation and can underestimate the cost of solving difficult low-level technical problems.
2. Bottom-up approach – It starts at the component level and estimate the effort required for each component. It add these efforts to reach a final estimate and usable when the architecture of the system is known and components are identified. It is considered as an accurate method if the system has been designed in detail and under estimate costs of system level activities such as integration and documentation.

In practice mostly useful cost models is bottom-up (substantiating a target cost) rather than top-down (estimating the "should" cost). The software project manager defines the target cost of the software, and then manipulates the parameters and sizing until the target cost can be justified. The rationale for the target cost maybe to gain a proposal, to ask customer funding, to attain internal corporate funding, or to achieve some other goal. It is important to analyze the cost risks and understand the sensitivities and trade-offs objectively. It forces the software project manager to examine the risks associated with achieving the target costs and to discuss this information with other stakeholders.

A good software cost estimate has the following characteristics -

i. It is conceived and supported by the project manager, architecture team, development team, and test team accountable for performing the work.
ii. It is accepted by all stakeholders as ambitious but realizable.
iii. It is based on a well-defined software cost model with a credible basis.
iv. It is based on a database of relevant project experience that includes similar processes, similar technologies, similar environments, similar quality requirements, and similar people.
v. It is defined in enough detail so that its key risk areas are understood and the probability of success is objectively assessed.
vi. Extrapolating from a good estimate, an ideal estimate would be derived from a mature cost model with an experience base that reflects multiple similar projects

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done by the same team with the same mature processes and tools.

7. Roadmap for Improving Software Economics

Roadmap for the phase of research in software economics begins with the goal: to develop fundamental knowledge that will enable significant, measurable increase in the value created over time by software and information technology projects, products, portfolios and the industry.

For this five basic parameters of the software cost model can be utilized as -

1. Reducing the size or complexity of what needs to be developed.
2. Improving the development process.
3. Using more-skilled personnel and better teams.
4. Using better environments (tools to automate the process).
5. Trading off or backing off on quality thresholds.

Other important goals are -Making Decisions that are better for Value Creation, Links between Technical Parameters and Value Creation, Links between Software Economics and Strategic Policy, Better Monitoring & Control for Dynamic Investment Management, Improving Software Economics Within an Enterprise.

Value creation is the goal; value itself can be a complex and subtle quantity. In particular, designers at all levels must make design decisions that are better for value added by a key intermediate outcome. To understand better the links between technical design mechanisms (architecture), context, and value creation, both are enable better decision-making in any given situation.

Software design involves both technical and managerial decisions. The use of formal methods or the architecture is the technical issues. The continuation, a change in a program or new information is managerial. The selection of a model is a technical decision about the managerial framework for a system. Software engineering is concerned with technical issues; the connection of technical decisions to value creation is what matters.

Software engineering is about making smart choices about the use of software product and process technologies to create value; software engineering research policy is about making smart choices about how to change the software engineering design space so as to enable greater value creation over time. Change is one of the factors that demands that greater attention now be paid to software economics. Understanding technology-to-

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value links is critical to making smart choices, but at the tactical project level in strategic policy-making deciding whether to promote certain results as having demonstrated value creation capabilities today, and in selecting research activities having significant potential to achieve long term. Therefore strategic value creation objective plays a vital role.

There is need of Software economics models for both the systems being developed and for sophisticated decision processes that support dynamic monitoring and control of complex software development activities. Dynamic management of investment activities are the significant uncertainties and gaps in knowledge is critical at levels from the single project to corporate and software Research and development investment policy.

Software economics within an enterprise involves using better data to produce better estimates of the likely costs and benefits involved in creating, sustaining, and employing a portfolio of software and information technology assets. These estimates can be used to initiate a dynamic management process in which progress toward achieving benefits is tracked with respect to expenditure of costs, and corrective action is applied when shortages or new opportunities arise. These tracking are also results in more relevant and up-to-date data for improving the cost and benefit estimation models, modeling costs, benefits, and value; tracking and managing for value; design for lifecycle value.

8. Issues

New product development is the one of the key factors for progress and competitive advantage in each organization. The most significant way to improve affordability and return on investment (ROI) is usually to produce a product that achieves the design goals with the minimum amount of human-generated source material. Reusing existing components and building reusable components have been natural software engineering activities. With reuse in order to minimize

Development costs while achieving all the other required attributes of performance, feature set, and quality and achieving a return on investment.

This research study offers an important step in the solution– to perform an analysis of innovation processes stage by stage. In a perfect software engineering domain with an immaculate problem description, an obvious solution space, a development team of experienced geniuses, adequate resources, and stakeholders with common goals.

Software economics execute a software development process in one iteration with

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almost no wastage and rework. Therefore to manage engineering activities so that scrap and rework profiles do not have an impact on the conditions of any stakeholder. Teamwork is much more important than the sum of the individuals. So Select people who will complement, Use better and fewer people and harmonize with one another.

The tools and environment used in the software process generally have a linear effect on the productivity of the process. Tools and automation allows improvements of 20% to 40% in effort. However, tools and environments must be viewed as the primary delivery vehicle for process automation and improvement, so their impact can be much higher. Software best practices are derived from the development process and technologies. Development processes stressed early sizing and timing estimates of computer program resource utilization.

9. Conclusion

The rapidly increasing economic significance of information technology is creating comparable increases in demand for information and software economics analysis techniques. The important challenge is to close the gap between software cost analysis techniques and software benefits analysis. Both are needed for effective decision making, but currently software-oriented benefits analysis techniques lag those for software cost analysis. Software cost analysis techniques require a strong understanding of software phenomenology and a reasonable level of understanding of econometric techniques (e.g. parametric modeling and analysis; probability and statistics). But software benefits analysis also requires a strong understanding of market factors (where to expect what kinds of economies of scale, network externalities, etc.). In the past, software engineering researchers have been relatively content to "tend their own garden" and concentrate on the software phenomenology they know best. But the pressures for improved cost–benefit and return on investment analyses are causing more software researchers and business-analysis researchers to come together to integrate their knowledge and tools into more effective capabilities, not just for analysis, but also for more effective software management.

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9. Role of Innovative Leader in 5 Trillion Economy

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Abstract: India moving towards 5 trillion Economies, but it's not a simple process. It requires many things go in right directions. Researcher things that Innovative leader is the key Person in 5 trillion Economies. Under this research paper, Researcher writes about Role of Innovative leader in 5 Trillion Economies. He explains many things about innovative leaders Like Meaning & Definition, Qualities of Innovative Leader, Role of Innovative leader in 5 Trillion economies, Challenges Face by Innovative leader & Examples of Innovative leader. From this research we exactly know that why Innovative leader is useful in India and how he contributes to development of India towards 5 Trillion Economies. To face the Globalized competition India must have some Innovative Leaders in their economies.

Keywords: Innovative Leader, Creative Visionaries, Power, Improvement Processor, Critical Situations, Controller, Effectiveness.

Introduction

India is moving toward the 5 Trillion economies & beyond, but this is not a single effort of any one organization or leader. If India really want to be 5 trillion economies then we have innovative leaders or to create innovative leader in India. The world is closing toward each other and every organization or businesses have customers from entire world. Customers demand and consumption habits are different, to solve this problem of business we require innovative leaders. Innovative leaders have capabilities to provide a business opportunity to entire world at same time. So from this we should know that the role innovative leaders and their roles in 5 trillion economies.

OBJECTIVES

To know the qualities of Innovative leaders.

To aware about role of Innovative leader in 5 Trillion economies.

To get the detail information of Innovative leader.

To understand the challenges face by innovative leader.

RESEARCH METHODOLOGY

The research work is descriptive in nature and based on secondary data only. The sources of data collected from different website. The accuracy and depth of the

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research paper is greater keep in objectives view.

Meaning & Definitions

Innovative leaders are creative visionaries, from his vision they build big ideas and motivate the employee to turn his idea into reality.

Vision of innovative leader is clear and focused; also they have a power of converting their visions into reality. Without a vision we cannot imagine the business. Beyond every business there is powerful vision and enthusiasm to turning into reality.

Qualities of innovative leaders

In our day to day life we found so many leaders. They do their thing properly and successfully but we cannot say that these leaders are innovative leaders. To become innovative leader, leaders must have some extra qualities and effort from this they can be called as innovative leader. Following are the some qualities of innovative leader:-

1) **Imagination :-**

In innovative leader there must be a powerful Imagination. They got some Extra quality though this they can imagine the future from his sight and vision. This imagination gives birth to so many business opportunities. This will be change the organization entirely. Their imagination is nothing but the power of seeing future at present time. This power of imagination distinguished leader to innovative leader.

2) **Communication :-**

Every leader has a quality of communication but innovative leader's has a magic to converting his vision into reality. Innovative leader convert their Vision into reality with the help of their managers, employees & team members. This will be happened when innovative leader is able to communicate his vision and generate enthusiasm from it. So to become innovative leader, leaders must have magic in his communication.

3) **Willing to kill emotions :-**

When leader is working on his project it is difficult to kill their emotions about the project. It is a difficult task for any leader, but if you are wants to be innovative leader you must have to kill your emotions. If leader knows that the project will not be contribute towards development of the organization then it is better to stop the project right know only. Innovative leader always spent his time, resource and energy on new project rather than not contributing project. Innovative leader know how to kill his emotions at the right time.

4) **Thing about Development only :-**

Innovative leaders are more practical than emotional. They always things about the development of employee or business

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opportunities. They want a development in the organization from his vision and work only. Innovative leader are trying from each and every activity of business to contribute towards development of the organization. Innovative leader always gives importance to social interest rather than personal interest.

5) Expertise :-

Expertise is worth full quality of innovative leader. If you want to be innovative leader then you has to expertise in your duties and work. You must know that how to handle a critical situation in the organization. And it will be able when you have expertise in your job. Innovative leader always gives that job to employee or himself in which they are expertise.

Role of Innovative leader

1) Idea Generator :-

Know a day's Innovative leader must generate idea for organization thought that organization can get the business opportunity in today's globalized world. Innovative leader can generate Idea from various ways like screening sensors and brainstorming etc. Innovative leader always find idea's that helps the organization to get opportunities in global market.

2) Improvement Processor :-

Innovative leader is improvement processor of the organization. He always thinks about the improvement of the organization. Improvement may be inform of Organizational work culture, improvement in the production skill, motivating employee etc. Therefor know a day's Innovative leader is act as Improvement processor of the organization.

3) Innovative Person :-

Innovative leader is a most innovative person in the organization. Organization expects innovations from the Innovative Leader only. Because he always try to innovative thinks in the organization. With his imagination power and clear Vision organization looks forwards Innovative leader as the most innovative person of the Organization.

4) Organizational Developer :-

Innovative Leader is act as Organizational Developer also. It is a prime duty of the Innovative leader to develop his organization in all aspects. The success of the organization is totally depends on the Innovative leader only.

5) Controller :-

Innovative leader is also act as a Controller of the organization. He is responsible for success & failure of the organization. Therefor innovative leader perform his role as controller very seriously. Innovative leader each and every time gives success to his organization with limited resource.

Challenges of Innovative Leader

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1) Increasing managerial Effectiveness :-

The lead challenge of innovative leader in 5 trillion economies is to manage the work of business. For increasing managerial effectiveness he has to work on time management, Strategic thinking, Decision making etc. Innovative leader has a capacity to increase managerial effectiveness.

2) Motivating staff :-

Motivating staff is also a difficult task for any leader. Innovative leader always try to satisfied staff from their work. For that purpose he gives job which likes employee to do work. But it is difficult to find out which work is likable by employee. Without motivation workers are not working properly. So it is difficult task of innovative leader to motivate the employee properly.

3) Informing about change :-

Change is not accepted easily by any one. In country like India Change is not accepted quickly. In the world of Liberalization, Globalization & Privatalisation Changes are made quickly. When organization not accepting change it is difficult to run business in modern Circumstances. There for the work of Innovative leader are to inform the change to employees and develop attitude to accept change.

4) 4) Managing Stakeholder :-

Innovative leader have to manage stakeholders. Each stakeholder has different approaches in organization. For example Shareholder only wants good return of dividend etc. Every stakeholder is concern with different approach with business or organization. Therefor it is difficult to any leader to manage stakeholder.

Examples of Innovative leader

1) Jeff Bezos :-

Bezos Amazon is recently the Third Valuable Company is the world. Amazon makes him wealthiest man on the earth. Jeff Bezos focused on Customers only, he always thing on customers way it gives innovative idea of Online shop. This innovative idea creates a history in the world. Amazon is one of the top most company under online shop store.

2) Mark Zuckerberg :-

Mark Zuckerberg is one of the Most Innovative and Successful leaders in the world. Key of success of mark Zuckerberg is Passion toward work. He employee only those workers they are passionate in their work.

Conclusion

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From above research work we understand the Importance of Innovative leader in 5 Trillion Economies, Challenges face by the Innovative leaders etc. Without Innovative leader it is not possible to get India in 5 Trillion economies. It's need of Innovative leader in Indian economy.

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10. Mass to Masses: A Road map to 5 trillion Economy & Beyond

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World is experiencing robust economic growth due to technological development and consistent scientific invention. The world economy has reached to 86,598,831 US. The economy of major G7 Advanced countries are reached to 39,683,427 US$ and the economy of China is reached to 14,140,163 US$ as per 2019 Wikipedia. The Indian economy is 11,325,669 US$ against world economy. Indian economy is emerging and optimistic.

The Modi government 2.0 has decided itself a goal to make India a 5 trillion US $ economy by 2024.For that country needs to grow from 8%-9% in GDP,seemingly exponential growth from present growth rate. Following are details of measure taken by

1. Infrastructure:

Infrastructure sector is an engine for Indian economy. The 5 trillion $ economy can be achieved by proper devising of Infrastructure policy like Sagarmala project,Bharatmala project, Mumbai Trans Harbour Link,Setu Bharatnam project,Rashtriya Rajmarg Zila Sanjoykta Pariyojna,Inland waterways,Gujrat Gorakhpur Gas pipeline,Chardham Highway project etc. will reduce logistic supply cost which will increase aggregate demand for nation. India has become a large market for infrastructure with contribution of US$738.5 billion in the FY 2017 and it's expected to become 3rd largest market in the world by 2025(KPMG Infrastructure report)Infrastructure related activities witnessed strong growth during 2017-18.

1. National Highway construction recorded the highest increase of 20%.
2. Freight traffic handled by Indian Railway increased 5089% year on year during April—July to 396.86 million tones.
3. Cargo handled by major Indian ports increased by 3.11% during April-August 2018..
4. Electricity generation in the country increased by 3.84% during April-July 2018.

In the past decade (FY2008-17),India invested about $1.1trillion on infrastructure but to achieve milestone, India needs to invest approximately $1.4 trillion in year to come till 2025.With the announcement made by PM Narendra Modi on independence day 2019 to invest RS100

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lakh crore over next five years, A Task Force is constituted to draw up the National Infrastructure Pipeline for each of years from FY2019-20 to FY 2024-25 with approval of Finance minister. This Task Force is constituted of Experts. This task force since its formation is in talk with various departments, ministries and commerce association to seek suggestion on reforms required in infrastructure sectors. As information released, Total project capital expenditure in infrastructure sectors in India projected at over Rs.102 lakh crore. During (FY 2020-25),sector such as Energy (24%),Roads(19%),Urban(16%) and Railway(13%) amount to around 70% of projected Capital expenditure in infrastructure in India

1.1 Road:

In FY2014,Highway construction in India was approximately 4,260 km which increased to 9,829 km in FY2018.It witnessed an increase at 23.25 % between these periods. National highway length has increased from 91,287 km in April,2014 to about 1,32,500 km as on December 31,2019.In Union budget 2019-20,Rs 83015,97 crore is allocated for National highway authority of India whereas Rs19,000 crore is allocated to Pradhan Mantri Gram Sadak Yojana(PMGSY) and unique feature of PMGSY is to connect all villages through road network by 2019.

Toll-Operate-Transfer(TOT) was introduced by Modi Government in 2016 to monetize public funded highway through model for partnership with private developers. Under TOT model, a bunch of 9 projects with a total length of 566 km has been awarded this FY2019-20.Further more project are being taken up to bid out more projects under TOT model this year. A furthermore ,a body (NHAI) is authorized to set up Infrastructure Investment Trust(IIT) to monetize completed National Highway that have a toll collection track record of at least one year under transparency.

I assert that dream of 5 trillion economies for Nation will be achieved with use of latest technology under transparency. To quote it, National Electronic Toll collection program has been launched by Road ministry for collection of user fee through FASTags based on RFID technology. Moreover it is trying by Ministry to bring interoperability of FASTags with the state government so that a single FASTags can be used both at State and National highway Toll Plaza.

Progress

1. The work of bridges across Sharawati backwater, approaches

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between Ambargodu and kalasvali in Karnataka and 16 packages Of Trans Rajasthan Highway project have been awarded.

2. A Three lane underpass inaugurated at Parade Road Junction near Manekshaw centre, New Delhi.
3. A Motor Vehicle(Amendment) Act,2019 is passed as road safety measures.

So above said program taken by Road ministry will boost to other sector including Steel,Cement,Auto,Real estate,Railway,Oil and Gas etc. which will boost robust macro demand for country.

1.2 Railway

Higher ever capital expenditure is recorded Rs.1,60,176 in FY2019-20 by railway. Railway ministry has proposed investment of Rs.50 lakh crore until 2030.S&P Global rating has projected to reach India's ambition of 5 trillion economies from these spending ,with so called "Multiplier Effect". Due to recent reforms taken, Gross revenue increased at a CAGR of 6.20 % from FY-2007 to Rs.1.85 trillion in FY2018.Revenues are expected to reach incredibly US$ 44.5 billion by FY-2020.In a race to raise fund, Indian railway has planned to earn Rs.15,000 crore through a Rail Display Network(RDN).

Railway is working on to increase transportation and logistics through METRO Rail,MONO Rail

Progress

1. Best ever safety record-Zero passenger fatalities during 2019.
2. Punctuality performance Mail/Express trains increased to 75.67%.
3. Speed of trains on Delhi-Mumbai and delhi-howrah routes to be raised to 160kmph.
4. All Indian railway trains will upgraded to electric by 2022.
5. Station with high speed Wi-Fi crossed 5,500.
6. Real Time in collaboration with ISRO fast racked.
7. First railway Commando battalion 'CORAS' to tackle the menace of terrorism and naxalism in railway launched to remove as danger to dream of 5 trillion economies.
8. To improve logistic, productivity and real time access to market ,Freight corridor to be in motion by 2021.
9. As largest recruitment drive in world,Ayushman Bharat is introduced in 91 hospitals of Indian railway.

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10. To control pollution and and reduce running cost, already launched plan of 1,000 MW solar power and 200 MW of wind power by2021-22.
11. A big success, Diesel locomotive works ,Varanasi has exported 07 diesel locomotives to Srilankan railways.
12. Indian railway to provide Broad gauge and Meter gauge diesel locomotives to Bangladesh railway in coming 2 years.
13. Most important, Indian railway to manufacture 44 rakes of Vande bharat Trains in Make in India scheme.

With above progress and plan, Railway will create robust demand for macro Indian economy and boost other sectors like Cement,Steel,Automobiles commercial vehicles, Real estate, Capital goods, Automobile Passenger vehicle, Consumer utilities, oil and Gas and Metals and Mining etc.

1.3 Civil Aviation

Aviation sector grew at a CAGR of 12.72% during FY 2006-18.The FDI recorded in civil sector US$1817.23 between April 2000 and December2018.The Indian government has planned to invest US$1.83 billion for development of airport infrastructure with navigation services by 2026.As of currently,620 aircrafts are being operated by Airline operators which is expected to 1,100 by 2027.All these plan show our mission and vision for India of 2025.

Achievement

1. Three airports viz Ahmedabad,Lucknow and Mangalore airport awarded to a private concessionaire through Public Private Partnership(PPP) to bring efficiency in delievery,expertise,enterprise and professionalism.
2. Delhi Air Traffic service Complex(DATS)-country's tallest air Traffic Control tower has been inaugurated.
3. eGCA is an introduced as online platform for faster delivery of services and regulation oversight.
4. E-sahaj is a scheme introduced for security clearance .Under UDAN,34 routes have been operationalised,awrded connecting to 4 unreserved and 4 unserved airport connecting 10 served airport under the scheme.

In coming days, Air aviation is going to massively expand and help passenger movement, creating huge demand for other related sectors.

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1.4 Shipping

According to the Ministry of Shipping, around 95 % of India's trading by volume and 70% by value is done through maritime transport. India has 12 major and 205 notified minor and intermediate ports. Under Sagarmala, six new mega ports will be developed in the country. To boost Shipping and maritime industry,FDI of 100% is allowed under automatic route. Indian ports and maritime has received FDI of around US $ 1.64 billion between April 2000 and March 2019.Cargo traffic at major port has increased to 699.05 million tones with 2.90%.Cargo traffic at non-major port was estimated at 491.95 million tons in FY 2018 and grew at 9.2 CAGR between FY2007-18.The government of India has started a project named UNNATI to identify opportunity areas for improvement in operation of major ports. Increased efficiency has led three times increase in net profits of major ports between FY 2014-18.A subsequent addition at port is expected to grow at a CAGR of 5-6 % till 2022 which will enhance 275-325 Million tones of capacity at major ports. There is need to bring more investment in ports and maritime which will increase Indian trade and export.

1.5 Power sector

Power play a significant role in economic growth and development. It is the most diversified sector in India. The power generation may be from conventional sources such as hydro,coal,natural gas,oil and nuclear power to non –conventional sources such as wind,solar,agriculture and domestic waste. Electricity demand in the country has been increasing rapidly- a good sign of increase in size of Indian economy. Seeing strategic importance of power sector, a record FDI of US $ 14.32 billion is witnessed by this sector. The government has launched

1. Deen Dayal Upadhyaya Gram Jyoti yojana(DDUGJY) to supply electricity to agricultural and non agricultural consumers in rural areas. This scheme aims at metering of distribution transformers, feeders and consumers.
2. Saubhagya –Pradhan mantra Sahaj Bijli Har Ghar Yojana to achieve universal household electrification by providing last mile connectivity and electric connection to every un-electrified households in rural and urban areas.
3. Integrated Power Development Scheme(IPDS) to ensure quality and reliable 24*7 power supply in urban areas.

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The government has projected for more investment in power sector to ensure uninterrupted power supply to industries. Power sector will contribute strategically in achieving far more 5 trillion economies by 2024.

2. Agriculture

India is still an agrarian economy. Over 70% people depend on agriculture. It contributes around 17% to total GDP of country. So Prime Minister's next move to transform agriculture. The Budget announced Pradhan Mantri Kisan Samman Nidhi(PM-Kisan) to provide Rs 6,000 income support to 12.6 crore small and marginal farmers. Same budget allocate Rs.1,30,485 crore for agriculture and fertilizer subsidy is Rs.79,996 crore for the year 2019-20.This allocation is 140% higher than allocation for 2018-19.The 'Agriculture Export Policy,2018' has decided to double farm exports to$60 billion by 2022. An investment of Rs.14,000 crore is projected in specialized cluster for different states. Benefit of that could be observed in increase of spice export to Rs.19,000 crore.A provision of selling the produce is made at MSP on e-Mandi through e-Nam network.

The policy maker has believed that Credit will play important role in strengthening economy. So more than dozen schemes are implemented to revive agriculture like Pilot Modified National Agricultural Insurance Scheme (MNAIS), National Agricultural Insurance Scheme (NAIS), Crops Covered(NAIS), Modified National Agricultural Insurance Scheme (MNAIS), and Weather Based Crop Insurance Scheme(WBCIS).

All these measure taken are sufficient enough to meet dream target of 5 trillion economies if implemented at grass root. A review of expected performance should be made time to time to suggest changes in policies accompanied by various training centers for farming at a cost of Government.

3. Science and Technology

In the words of Union minister for science and Technology, Technology is strong priority area for his government and it aims to make people science-centric. In terms of FDI in technology, India is ranked third across world. India ranks 6th position for scientific invention and 10th for patent. The engineering R7D and product development is expected at a CAGR of 20.55% to reach US $ 45 billion. To promote science and Technology in country,PM Narendra Modi has inaugurated Indian Science Congress(ISC)2019 on Jan 3,2019 with top authorities of DRDO, ISRO, DST, ICAR, CSIR, ICMR, AICTE, NAAC, UGC,

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ISCA, the USA, and UK Universities. The PM Modi in science congress has appealed to intellectual to use of Science and Technology for

1. Better management of water resource
2. Finding alternatives to plastic
3. Extraction of resource from e-waste.
4. Reuse of kitchen and farm waste
5. Better energy storage in batteries
6. Innovation in health care and medical devices
7. Sustainable energy
8. Transport infrastructure

If above appeal works out, India will soon be in third place in terms of market GDP. ISRO has taken India at new height with its regular contribution. If Policy makers take notes from PM Speech delivered at Indian National Congress, India will achieve its dream milestone and beyond before 2024.

4. Merger of Banks

In recent past, Public sector Bank(PSU) has suffered from NPA and higher running costs. To save PSU from heavy NPA,decrease running costs and increase profitability, Following merger of PSU taken was much needed step.

1. Punjab National Bank(PNB) will merge with Oriental Bank of Commerce and United Bank to create India's second largest lender of nation with a business of Rs. 17.5 lakh crore.
2. Union Bank of India (UBI), Andhra Bank, and Corporation Bank will be amalgamated to create India's fifth largest PSB.The merged entity will have deposits of Rs14.6 lakh crore.
3. Indian Bank with Allahabad Bank will merge to create the seventh-largest PSB with Rs 8 lakh crore businesses.
4. Canara Bank and Syndicate Bank will merge to create India's fourth-largest public sector bank (PSB) with a business of Rs15.2 lakh crore.

Above merger will lead to a high Current and Saving account(CASA) ratio and a high lending capacity. Core banking solution(CBS) technology in these banks will enable quick resolution of gains.

To make Indian bank out of crisis and revive them, Some of more reforms should be announced by Government like

1. Setting up 'Maiden Lane 'instrument by RBI.This will help those want to purchase Stable asset of troubled bank, They can make a proposal for same to carve out. Remaining assets wiil be purchased by the Maiden Lane instruments

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funded with loan from RBI.

2. An arrangement to refinance maturing loan for those who want to re-mortgage a residential or commercial property for their working capital.
3. Lubricating banking system through cutting benchmark interest rate and purchase of government bonds by RBI to enhance liquidity in banking system.

5. Real estate

Real estate is one of priority sector for present government to reform. In includes housing,retail,hospitality and commercial. Real estate is expected to reach US $ 1 trillion by 2030and will contribute 13% of country's GDP by 2025.In increasing economy, the demand for IT ITeS,retail,consulting and e-commerce have registered high demand for office space. Commercial office stock and Office space leasing are expected to cross 600 million square feet and 100 million square feet respectively. In real estate, Private Equity and venture capital investment have reached US $ 1.47 billion between Jan-March 2019.

initiative of Government

i. To build 100 smart cities across country.
ii. A subsidized loan under Pradhan Mantri Awas Yajana(PMAY).
iii. A special packages Rs 25,000 crore to real estate to fund to stalled housing project.
iv. A Real Estate Investment Trust(REIT) enabling investor to invest in real estate market.

The above initiative by government will create opportunity worth Rs.more than 1.25 trillion over the coming years will have corresponding effect on demand of other sectors such as Cement,Road,Banking.Metal,Automobile, Rail,Insurance sectors. If this sector achieves its goal ,it will single handedly meet 5 trillion economy dream of country by 2024.

6. Financial service

India has a diversified financial sector comprise of commercial bank, insurance companies, on banking financial companies,co-operatives,pension funds, mutual funds etc.so it becomes a very important for government to libaralise,regulate, and enhance the this sector for pushing macro domestic demand. The Government has taken several measures to facilitate easy access to finance for Micro, Small and Medium Enterprise(MSME).They are Micro Unit Development and refinance

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industry(MUDRA),Stand up India, Pradhan Mantri Suraksha Bima Yojana(PMSBY).

Positive impact of this initiative could be seen in growth of Mutual Fund in Asset Under Management, All time high in SENSEX and NIFTY index etc.So Indian economy is optimistic to reach 5 trillion economies by said time period.

Apart from this Finance Minister Nirmala Sitharaman has indicated fiscal measures as to changes in income tax for both Individual and Corporate as well as in structure of other indirect taxes as a move towards 5 trillion economies.

Referring to above,There is huge potential for economy to reach the desired goal by 2024 and soon India will be third largest economy of world.

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Watchout !

More Publications to come soon !!!