AURORA'S JOURNAL OF MANAGEMENT

AURORA'S JOURNAL OF MANAGEMENT

July-September, 2019

ajm@absi.edu.in

Aurora's Journal of Management (AJM) is a quarterly publication of Aurora's Business School, Hyderabad, India. Its objective is to disseminate concepts of professional management and contribute to a better understanding of the context, resources, structures, systems, processes, and performance of organizations. Its focus is on applied research and reflections that are relevant to practicing managers and to meet the standards of academic rigour. It has special emphasis on contemporary management issues that are relevant to emerging economies.

Every issue of the journal carries features comprising of research articles, book reviews and articles dealing with social, economic and political concerns which have direct bearing on business (for further details refer to Guidelines for Authors). Authors can submit their contribution under any feature mentioned above to the following address.

The views expressed in the articles and other material published in *Aurora's Journal of Management* do not reflect the opinions of Aurora's Business School.

Claims for missing issues should be made within six months of publication.

Aurora's Journal of Management
is a quarterly Journal of the
Aurora's Business School,
Hyderabad.

AURORA'S JOURNAL OF MANAGEMENT

CONTENTS	Page No.

Articles

Guidelines for Authors

Aurora's Journal of Management (AJM) invites original papers from scholars, academicians and practitioners pertaining to management, business, and organizational issues. AJM also welcomes articles dealing with the social, economic and political factors that influence the business and industry. Papers, based on theoretical or empirical research or experience, should illustrate the practical applicability and/ or policy implications of work described.

The Editorial Board offers the following guidelines which are to be followed while contributing papers for publication in AJM:

Manuscript

The Author should send three copies of the final manuscript. The text should be double-spaced on A4 size paper with one-inch margins all around. The Author's name should not appear anywhere on the body of the manuscript to facilitate the blind review process. The Author may send a hard copy of the manuscript to Aurora's Business School or e-mail the MS Word Document at ajm@absi.edu.in. The manuscripts should be submitted in triplicate and should have been proof-read by the Author(s) before submission.

The paper should accompany on separate sheets (1) An executive summary of about 500 words along with five key words, and (2) A brief biographical sketch (60-80) words of the Author describing current designation and affiliation, specialization, number of books and articles in refereed journals, and membership on editorial boards and companies, etc. along with their contact information.

AJM has the following features:

• Research Articles which present emerging issues and ideas that call for action or rethinking by managers, administrators and policy makers in organizations. Recommended length of the article is 7,500 words.

•Book Reviews which cover reviews of contemporary and classical books on Management and related subjects.

• Articles on social, economic and political issues which deal with the analysis and resolution of managerial and academic issues based on analytical, empir

Headings/Sub-Headings

The manuscript should not contain more than 4-5 headings. It is suggested that lengthy and verbose headings and sub-headings should be avoided.

Acronyms, Quotes and Language

Acronyms should be expanded when used for the first time in the text. Subsequently, acronyms can be used and should be written in capitals only. Quotes taken from books, research papers and articles should be reproduced without any change. American English is recommended as compared to British English. Keeping the diversity of the readers in mind, it is suggested that technical terminologies should be explained in detail while complicated jargon may be avoided.

Tables, Numbers and Percentages

All tables, charts, and graphs should be given on separate sheets with titles. Wherever necessary, the source should be indicated at the bottom. Number and complexity of such exhibits should be as low as possible. All figures should be indicated in million and billion. All graphs should be in black and not in colour. The terms 'and' and 'percentage' should not be denoted by their symbols (& or %). Instead the complete words must be used.

Notes and References

The notes and references shall be presented at the end of the text, with notes preceding the list of references. Both, the notes and references should be numbered in their order of appearance in the text.

Endnotes, italics, and quotation marks should be kept to the minimum.

References should be complete in all respects:

(a) The reference for journals shall be given as :

Hannan M T and J Freeman (1977), "The Population Ecology of Organizations", American Journal of Sociology, Vol.82, No.5, pp.929-964

(b) The reference for books shall be be given as :
Hooda R P (1998), Indian Securities Market, Excel Books, New Delhi.

Copyright

Wherever copyrighted material is used, the Authors should be accurate in reproduction and obtain permission from copyright holders, if necessary. Articles published in Aurora's Journal of Management should not be reproduced or reprinted in any form, either in full or in part, without prior written permission from the Editor.

Review Process

The Editorial Board will share the manuscript with two or more referees for their opinion regarding the suitability of the papers/articles for publication. The review process usually takes about 3 months. Aurora's Journal of Management reserves the right of making editorial amendments in the final draft of the manuscript to suit the journal's requirements and reserves the right to reject articles. Rejected articles will not be returned to the Author. Instead, only a formal communication of the decision will be conveyed.

Electronic Copy

The Author is advised to send an electronic version of the manuscript in MS Word once the paper is accepted for publication.

Proofs

Correspondence and proofs for correction will be sent to the first Author unless otherwise indicated.

Reprints

The Author is entitled to receive two reprints free of charge.

MANAGEMENT EDUCATION: CHALLENGES AHEAD

Dr K. Raghu Naga Prabhakar, Director, Aurora's Business School, Hyderabad
(He can be reached at prabhakalepu@gmail.com)

Abstract

The new management education will have to mould its curriculum in such a way that academic elegance and business relevance should go together. It should be rewinded to make students future-ready. Management students must be abreast of the advances in technology. They must be in opposition to leverage them for better results and comprehend the implications. Even the faculty need to be constantly learning, reading and updating themselves on the latest and best practices. The students of management should be equipped to manage the emerging environment. They must develop an attitude to experiment, embrace new challenges and develop a knack for discovery driven learning. They must be very articulate and open about their financial and professional goals and fearlessly give their feedback. The curriculum must be more-skill based, practical and experiential rather than theoretical. It should be aimed at shaping managerial and entrepreneurial talent for local and regional markets. This article reflects the opinions of protagonists in the field.

Key words

Cascades, Digital technologies, Ethical grooming, Leverage, Future-ready, Demography, Corporate citizens, Employability, IVY League Certifications, Negotiation, Transformational inputs, Curriculum upgradation, Governance.

Management is an art and a science, it stands the test of time. But as an art it adapts to suit the changing and challenging business landscapes. Previously, Information technology was an enabling factor where as now, it has emerged as a strategic driver of commerce and industry. Consequently, there is a gap between what is being taught in a business school and actually what is happening in the industry.

Research and development: - These two key fields have been neglected in our professional educational institutions. Their importance is not brought home to the students. Faculty members are not encouraged to engage themselves in research. Moreover, they are discouraged since it does not also play well. Consequently, there is the scarcity of experts in the faculty in most disciplines.

Traditional business and enterprise models are in no way relevant to the present global business environment. Every aspect of business management has undergone a sea-change. Hence there will not be a panacea, a single management programme will not be possible to deliver to deliver the goods. If a business wants to achieve sustainable growth, so many factors have to work, like the nature of the enterprise, the psyche of the leadership team, the characteristics of the market, the culture and demography of the consumer and geopolitical and social variables.

Previously for Business Schools, ensuring a good learning outcome was the first preference and getting placements for the students was the second priority. But now the B-Schools are expected to place all their students. The noble task of transforming them into efficient mangers and responsible citizens is gradually fading away and grooming them for employability is gaining ground.

Focus on Perspectives: A management student is expected to gain the following perspectives. Firstly, they should acquire functional management knowledge along with industry exposure. Secondly, they should master analytical, problem solving, decision making, communicative and negotiative skills. Thirdly, they should absorb this knowledge and skills into their competitive and demanding environmental boosting their self confidence and positive attitude of life. In short, they should become smarter learners. A good management programme synthesis these qualities, bringing about a transformation within the student. It should provide such transformational inputs and experiences which are relevant and appropriate. Though there is a wide gap between the newly acquired capabilities and the contextual requirements, the young management graduate should be able to bridge it effectively.

In this regard even the management faculty have to apply in their teaching the basic principles of competitiveness. They too need periodical self-renewal to enable the students to realize the deeper relevance of fundamentals in this fast changing business environment. They must educate the students to acquire the core capabilities required for professional managers. Their imparting should occupy the subconscious minds of the students and remain with them for life.

The management curriculum will have to be constructed not only for knowledge enhancement but also for attitude change. It must be experiential and experimental. Its upgradation initiative demands a huge investment of time, efforts and funds, because the modern business scenario is very dynamic. Our B-School curriculum is at large derived from that of western countries, designed from the perspective of large global corporations. This may be helpful to the students in Top- B Schools of India, who will get placements in global corporate. But for those who study in regional institutes of management, the focus must be on designing a curriculum which is more skill based, practical and experiential, rather than theoretical, which can shape managerial and entrepreneurial talent for local markets, comprising small and medium enterprises.

A constructive curriculum is expected to build not only knowledge but also attitude among the learners. Moreover, it must be experiential, which is likely to last a life time. Besides generic management programmes, short specialization programmes are to be introduced and customized programmes have to be designed to suit specific sectors. The B-Schools should put the students through career counseling to sensitise them to the pulse of the job market.

Employability: The students are disappointed when they realize the gap between their salary expectations and market conditions. Even the talented and quality faculty are scarcely available because the cream of them are not inclined to academics because there is much discrepancy in

compensation between academics and industry. They are more interested to pursue research as compared with teaching, as promotions and career growth depend mostly on the accomplishment of research projects. Research is no doubt desirable and valuable, as it contributes to ripe experience. But unfortunately, quality teachers are not available for teaching. The need of the hour is a long-term collaboration and strong partnership between industry and academics. The industry, instead of merely confining itself to participation in academic councils and determination of curriculum, its experts should contribute through their practical and corporate experience and teach the conceptual frame works to the students.

Even the quality of corporate governance is also not upto the mark. It should be directly correlated with the quality of education imparted. In many private business schools, the governing boards comprise the family members of the promoters. There is no representation from other important stakeholders such as faculty, industry and alumni. This is resulting in lack of desired level of vision and guidance.

There has been a token statement against majority B-schools that they fail to produce managers with employability skills. The Business Standard, in one of its surveys made it clear that in placements, infrastructure, governance or scale of operations, the bottom ranked colleges are lagging far behind, when compared to IIMs and other such prestigious institutions. A large number of B-Schools have registered as low as 20% percentile in placements which shows that they are not at all doing well in getting their students well-placed. Whereas top ranked colleges achieved 95%. This is very saddening. This scenario has to be changed. Bulk of work force entering the market comprise the students coming from these below the standard colleges which face many constraints. Hence there must be a sea-change in their mindset and the practices adopted by them.

Other Concerns: Irrespective of the place of the institute there should be a research oriented approach which is absent at present. Lack of resources is not the simple reason. They can go to the industry and find out the problems being faced by them and find solutions too. A good B-School should not be management driven but it should be student driven. To unlock the true potential of students, they need to be given industry-exposure and networking opportunities outside the campus. Anil D. Sahasrabuddha, Chairman of the AICTE opined that it would be better if the students are asked to take up an internship for one full semester. They should be exposed to constructive case studies. Good faculty and curriculum will make them deliver goods effectively. Faculty has to be hired from premier institutions with ripe teaching experiences. Even the curriculum has to be revised every year so that the skills needed by the industry are met in ample measure. Financial labs for on-line trading, Analytics lab to train students on the fast emerging data science field and entrepreneurship lab to incubate the students ideas and to get funding are to be introduced in B-Schools.

Indians have no doubt become more self-confident in all fields and management is no exception. It is seen through Indira Nooyis and Satyanadellas. Indians have become successful internationally which is also filtering through to the youngsters. This can be attributed to Indian

values which are influencing management education, education research practices. Business schools are trying to ingrain these values into their students. "Artha" (money) is inferior to Dharma (sense of duty) in India. This approach is influencing modern management research in many American universities. Even Indian Institutes are also trying to incubate such practices. The Aurora's Business School is a forerunner in this regard. It has been moulding its students into socially responsible management professionals and entrepreneurs.

TOWARDS A SKILL INDIA: AN ENDEAVOUR TO ENHANCE EMPOLYABILITY

C. Kameswari, HOD, Aurora's Business School, Hyderabad
(She can be reached at kameswari@absi.edu.in)

Abstract

Skill India, skill development and employability skill are terms that have assumed greater significance today than any other time before. It is generally alleged that the youth of our country are lacking in employability skills. The Government of India has been endeavouring to offer various skill development programmes for the empowerment of the youth. If the younger generation can utilize them effectively, they will prove their mettle in the job market. They have to start their academic year with that view so that by the time they complete their course, they will be proficient in various skills that contribute to their employability. This article throws light on such skill development programmes which are available to them.

Key words

Employability, Entrepreneurship, Apprenticeship, Industry-Institute interaction, Public-Private Partnership, Job-exposure.

In India every year nearly two crore students are coming out of colleges and universities, after pursuing various courses like ITI, Polytechnic, Engineering, MBA and other traditional academic courses like BA, B Com and BSc and other PG Courses in sciences and humanities. But unfortunately, a majority of them are remaining jobless as they are, being unable to compete in the job market. They can not get employment and are being subjected severe constraints. The main reason attributed to this catastrophe is their lacking in field level skills and practical knowledge. Hence the Government of India, after taking the recommendations of the experts and academicians into consideration, is embarking on bettering the employability skills, with "Skill India" as the main target. To achieve this, several skill development programmes are being implemented for the benefit of the job seekers.

"Skill India" is a special skill development programme, launched on 15th July, 2015, on national level, to enhance the field level talent of the youth. It is intended to offer skills to 40 crore people by the year 2022.

For this, training centers will be set up all over the Country. The MSDE (Ministry of Skill Development and Entrepreneurship) and the NSDC (National Skill Development Corporation) will work together, to fulfill this herculean task. These Centers will be established on Public-Private Partnership. They impart short term and long term courses to the youth. Examinations will be conducted to the Participants and certificates too will be issued to them, on the successful completion the course. Though these training programmes are being implemented on a large scale, many students still don't have an understanding of them fully. Nearly 70% of the students are not aware of them, as Per a survey taken up by "young India-

Work India" under the joint auspices of observer Research foundation and World Economic forum

The National Skill Development Corporation stands as a uniform Platform to impart training in various fields, right from X^{th} Standard to professional courses; with the name of Sector Skills Councils. Training is available in nearly 30 departments. The NSDC has made agreements with various institutions, in various areas. The interested students have to complete their training, in the stipulated time limit, at the centers nearer to them.

The next is the PMKVY (Prime Minister's Kaushal Vikas Yojana), which was launched in 2015. Its aim is to train one crore young people in the country, by 2020. This is the most important skill development programme available in the country. All the divisions like MSDE, NSDC and DGET have been brought under one roof to formulate the policies of the PMKVY. Practical training is imparted to various students, on 3 month, 6 month term basis. At the end of the training a test will be conducted to them. Those who qualify themselves in the test will be offered jobs in the industries related to their training received. The students can login into the official website of (pmkvyofficial.org) and update their profiles. They can know the details of the training centers nearby.

Another important scheme intended to enhance the employability among students is the National Apprentice promotion Scheme whose objective is to impart apprenticeship training to 50 lakh people by 2020. It is designed to cater to the needs of both the Students and industry circles with the advent of this scheme, companies should appoint apprentice trainees invariably. Such companies are given incentives by the government which bears 50 % of the expenditure incurred for imparting training to the student. The incumbents have to have to login into the website (www.apprenticeship.gov.in) and register their details on considering their qualifications, the companies' shortlist their candidates online. Later, after conducting the interviews, they confirm them as apprenticeship trainees. Mr. R. C. M. Reddy, honourable member of the National Skill Development authority aims that there are so many avenues for the youth to receive Skills at the field level. Due to non-understanding of such schemes, they are deprived of many opportunities. Institutes should take the initiative to motivate them properly. Especially rural youth have to be apprised of such skill development Programmes. As all these training Programmes are being held with the Partnership of industry circles, there is every possibility for the incumbents for getting employment.

SANKALP is another scheme designed by MSDE recently. It is abbreviated as "Skills Acquisition and Knowledge Awareness for Livelihood Promotion" it provides necessary funds to the institutes for imparting job oriented training to students. Through this scheme, the institutes establish training centers under Public Private Partnership and train the students. Even industry circles take part in it. As a result; students get be better employment opportunities in the industries concerned. Their website.

The AICTE (All India council of Technical Education) supervises Professional courses like

B Tech, M Tech, MBA at the national level. It too is implementing many skill development programmes for the unemployed youth. PMRVY-TI (Prime Ministers Kaushal Vikas Yojana for technical Institutes works under the AICTE. Its objective is to train nearly10 lakh drop outs from polytechnic and engineering colleges, under the jurisdiction of AICTE. Technical skills are imparted to the drop outs and help is offered to them for getting employment. To achieve this, the AICTE has set up training centers at its affiliated colleges. Interested students can register the names at the Centers nearby, receive training and certificates on the successful completion. The training will be held for 250-300 hrs. The details of the students will be registered online so that the industry circles know about them.

EETP (Employability Enhancement Training Programme) is another skill development scheme introduced by the AICTE. To implement this effectively, it made agreements with organisations like ICT Academy, Monster.com, LinkedIn etc. The EETP gives the details of those who completed the training to these institutions. Later, the profiles of the trainees are kept in the concerned websites, on the basis of their performance during the training period consequently employers can scrutinise the details of the trainees and appoint the deserved.

NEEM is another scheme launched by AICTE to provide employability Skills to the students at diploma level. It is abbreviated as National Employability Enhancement Mission. The students who passed or who are pursuing diploma courses are the targets for this programme. On the basis of their branch, they are provided with necessary skills, to be appointed in the related industries. Sixteen private Agencies called Neem facilitators are appointed at the national level by the AICTE, to carry out the training programmes.

Under the auspices of the university Grants Commission, several traditional degree courses, colleges and universities function in the country. The UGC provides necessary skills for the students of traditional courses, who can exploit them to get good jobs.

UGC Special Assistance Programme offers help to the institutes in teaching and research. It even provides financial incentives for this purpose. But the institutes have to adhere to certain stipulated standards. They have to register their details online so that the UGC selects the eligible ones.

"Deen Dayal upadhyaya koushal kendras" is a scheme intended to enhance the skills among vocational students. In it vocational courses are taught in the respective colleges, at an advanced stage, implementing on job training method. Consequently, students acquire field level Skills, in their related fields and will be forerunners in the job market.

DDU-GKY (Deen Dayal Upadhyaya Grameena Kaushal Yojana) is another scheme launched five years ago to improve employability skills among the rural youth. Under Public-Private Partnership training centers are setup in various rural areas. After the Successful completion of the training, even placement assistance is also available to the trainees. The interested candidates can log in to the website ddugky.gov.in to register their details and to know about the training centers, in their vicinity.

The MHRD (Ministry for Human Resources Development) has proposed a new scheme called SREYAS (Scheme for Higher Education in Youth in Apprenticeship and Skills, to private professional skills to the students who pursued traditional degree courses. The main objective of the scheme is to offer on-job exposure to them. Apprenticeship opportunities will be available to the degree students so that they will acquire Professional Skills, by the time they complete their graduation. This Concept is nearer to the policy of "earn while you learn" in education. The MHRD is also planning to introduce professional courses even in BA/B.Com/BSc Courses. As per the directives of the sector skill councils and the national skill qualification framework, training is given in the apprenticeship courses like IT, retail, logistics, tourism, healthcare, BFSI, electronics, media, life sciences and management. Examinations will be conducted and certificates will be issued to the successful candidates who can likely get employment in the same organisation in which they received apprenticeship training.

References

1. Website: Shreyas.ac.in /Home/ about.

HOW SHOULD THE ENTREPRENEURS CONVERT THEIR CONCEPTS INTO CONSTRUCTIVE BUSINESS?

Dr K. Raghu Naga Prabhakar, Director, Aurora's Business School, Hyderabad
(He can be reached at prabhakalepu@gmail.com)

Abstract :

The present business scenario does not guarantee jobs to the youth, lifelong. Hence they have to search for their own opportunities, creating ethical values for themselves. They should strive to be enterprising and enthusiastic in profession and self aspirants with a frame work for entrepreneurship, to enable them to initiate innovative ideas and materialize them successfully. An entrepreneurship has to be completely different from other enterprises. The central idea of a successful enterprise is value innovation, planning and continuous improvement. The author of this article is highly indebted to Mr. Rami H. Alamoudi and Mr. Basim A. Alandijani from whom a lot of valuable information is derived. They work for the department of Industrial engineering, King Abdulaziz University, Jeddah, Soudy Arabia. Their research paper was published in Inventi Impact, Issue 1, Volume 2018. This is a sincere attempt to motivate the students of management to set up their own start-ups and become successful entrepreneurs.

Key Words

Venture, Blue ocean strategy, Balanced scorecard, KAIZEN, Assigned idea, Sustainable business, Market boundaries, Performance measurement, Market analysis, SWOT, Key performance indicators.

In recent times, economists have been showing much interest on "entrepreneurship", because small businesses have proved themselves to be efficient economic ventures. Entrepreneurship has many societal benefits like driving innovation, decreasing unemployment and satisfying new consumer demands. The term can be defined as the qualities and actions of individuals who take the risk of venturing into new and unknown areas of work. They start a business, being inspired by a new idea which is assessed using a reliable scientific approach. This article studies some main and outstanding strategies which have been proven to be effective in many international firms. They are popularly known as the Blue ocean strategy (BOS), Balanced scorecard (BSC) and continuous improvement (KAIZEN). It provides an integrated framework which combines these three strategies so that the budding entrepreneurs are properly guided to convert their ideas into business.

Inspite of the incentives sanctioned to the startups, the entrepreneurs are still facing some problems. Some ventures are failing quickly after they are launched. The market has always cut throat competition. Hence entrepreneurial strategies are becoming more and more significant. The entrepreneurs have to adopt a scientific framework to flourish in business. They have to develop a competitive strategy by creating an uncontested market space. They have to determine the long term strategic objectives and short term operational objectives. They must

be in a position to evaluate businesses using the key performance indicators. They should design a continuous improvement plan for business.

What is entrepreneurship? How can it be defined? These are the most complicated questions. We can find two different approaches in attempting a definition. First, existing entrepreneurs have to be observed and studied. Second, to propose a prior definition of entrepreneurship and its related behavior so that those who engage themselves in entrepreneurial activities can be embraced into an all-pervasive definition. Jean Baptiste Says, "The entrepreneur shifts economic resources out of an area of lower productivity into an area of higher productivity and greater yield". Joseph Schumpeter says that entrepreneurship occurs when there is innovation in the introduction of a new product, organization or a process".

This view has a conceptual abstraction characterized by the creation of new combinations. Here a distinction is shown among five different manifestations of entrepreneurship. They are a new good, a new method of production, a new market, a new source of supply and a new organization. Hence the definition is incomplete as the boundaries of entrepreneurship were not demarcated accurately. "Entrepreneurship is the manifest, ability and willingness of individuals on their own, in terms, within and outside existing organizations, to perceive and create new economic opportunities and to introduce their ideas in the market, in the face of uncertainty and other obstacles, by making decisions on location and the use of resources and institutions" -Wennekers & Thurik(1999).

According to the modern concept, an entrepreneur can be defined as a person who transforms the present economic order by introducing new products, services, and method of production, by creating new forms of organization and by exploiting new raw materials.

Now, let us go into the three crucial strategies to develop a constructive frame work for entrepreneurs. Among them, the first is "Blue Ocean Strategy" (BOS) which came into existence in 2005. It was formulated by Mr. W. Chankim and Renee Mauborgne, professors at INSEAD and co-directors of the INSEAD Blue Ocean Strategy Institute. They studied more than thirty industries, 150 strategic moves, over a period of 10 decades. They found the fact that mere tough competition does not suffice to achieve success in business. It is possible only by creating "blue oceans" by which they meant unrivalled market space, which can create a leap in value for the company, its employees and consumers. It can open the vistas of new demand for their products, not with standing the competitions.

This strategy presents analytical frameworks and tools to foster a company's competence to capture 'blue oceans' in a systematic way. The protagonists of the theory maintained that red ocean theories which are traditionally based on competition are not sufficient to sustain high performance. They aimed that such theories assume that the structural conditions of an industry force it to compete with other industries. This is called structuralism view or environmental determinism. To get an edge over others in the market, industrialists assess the performance of their competitors and try to excel them. So, competition becomes the defining variable of

strategy, as getting a larger share of the market is considered a zero-sum game where one's loss is another's profit. Cost and value are seen as tradeoffs here and a firm chooses a distinctive cost. Structural factors determine the total profit level of the company which prefers to capture and redistribute wealth, instead of creating wealth. When they focus on diving up the red ocean, the growth becomes limited.

On the other hand, the blue ocean strategy asserts that market boundaries and industry structure is not fixed and they can be reconstructed by the actions and beliefs of industry runners. This is called the re constructionist view. Market boundaries and structure are only based on the hypothesis of the managers. This should not limit their thinking. For those who follow the blue oceans, extra demand is always there, unexplored. It should be created. Thus, the priority should be transferred from supply to demand. Competing is undermined by value innovation i.e., the creation of innovative value to explore fresh demand. Further, this is fulfilled through differentiation and low costs.

The second is the Balanced Score Card (BSC). It is a strategic planning and management system which is applied by private and public sector industries and even by NGO's. It effectively combines business functions with the vision of the organization. It improves internal and external communications. This strategy has been in force from its early use as a simple performance measurement framework to a full strategic planning and management system. It can change the strategic plan of an organization from a passive document into the "marching orders" of the company. Its framework can measure performance as well as the method of measurement enabling the planners to execute their strategies. To Quote, "The balanced scorecard retains traditional financial measures which tell the story of past events, an adequate story for industrial age companies for which investments in long term capabilities and customer relationships were not critical for success. These financial measures are inadequate, however, for guiding and evaluating the journey that information age companies must make to create future value through investment in customers, suppliers, employees, processes, technology and innovation" -Kaplan and Nortan

The third is "continues improvement", popularly known as "KAIZEN". Three decades ago, the stress was on employee involvement, empowerment through the team work approach and interactive communication, in management. Improving job design was not at all a new concept, but Japanese firms seemed to take an edge over others, in implementing such techniques, in their endeavor for global competitiveness. They demonstrated a greater commitment to the concept of continuous improvement, which in their language was referred to as KAIZEN which means improvement, in Japanese philosophy. It involves everyone in the organization right from the top managements to managers, then to supervisors and to workers. This concept is so deep rooted in their minds that they often do not even realize that they are thinking KAIZEN as a customer driven strategy for improvement. To quote Imai "Our way of life, be it our Working life, our social life or our home life, deserves to be constantly improved"

Thus, value innovation is covered by Blue Ocean strategy, while the Balanced Scorecard technique covers the planning area and continuous improvement by KAIZEN. The total system is called the BBK model.

Now let us discuss the various aspects of these three phases.

The general idea of the first phase, i.e. Blue Ocean Strategy is studying the market to know the main competitors and competing factors and then drawing the strategy curve taking differentiation into consideration. This is called market analysis without which the needs and requirements of the customers cannot be predicted. Later, the ERRC Grid-four action framework, Eliminate, Reduce, Raise and Create. Create a new value curve which is necessary to unlock a new Blue Ocean. In phase 2, the Balanced scoreboard, the values, vision, mission, strategic objectives and KPI measures are defined and aligned together. Firstly, the SWOT analysis technique is applied. It stands for strength, weaknesses, opportunities and threats. Later, strategic objectives have to be converted into operational objectives measured by using the KPIs.

The strategic objectives are highly qualified and motivated staff, selling creative and non-traditional products, a smooth work flow, productivity increase, improving the supply chain process, global expansion, improving financial impact etc. Again, the operational objectives are grouped into four general perspectives, namely, learning and growth, internal processes, customer and finance. The cause and effect of each strategy is represented by strategy mapping. The KPIs are to be determined with meticulous care. It is one of the critical steps of a Balanced Scorecard.

In the third phase, KAIZEN, a continuous improvement culture is built in the company. KAIZEN preparation is marked by team training, Customization, employee training and launching.

Thus, a designed framework integrates the three main techniques to achieve idea innovation, business strategy, strategy measurements and improvement.

References

1. Alamoudi, R. H and Alandijani, B. A. (2017) "Developing a framework for entrepreneurs to transform their ideas into businesses: A case study in the food sector. American journal of industrial and business management,7,444-463

2. World Bank (2014) Doing business 2014, World Bank Group, Washington D.C.

3. Drucker, P.F (1985) Innovation and Entrepreneurship. Harper Collins, New York.

4. Parker, S.C (2004) The Economics of self-employment and Entrepreneurship. Cambridge university press, Cambridge.

INDIAN ECONOMY: A SURVEY OF THE FY 2018-19

Prof. P. N. S. Datta Sarma, Aurora's Business School, Hyderabad
(He can be reached at dattasarma1956@gmail.com)

Indian Economy recorded a GDP of 7.2% during the financial year 2017-18, whereas it came down to 6.8% in 2018-19. Inspite of this fall, India stood as the fast-developing economy in the world. When compared to 2017-18, there a decay in the world production in 2018-19. In 2018, the world economy decayed due to trade clashes credit policies and economic controls in the developing countries of the world. India stood as the seventh largest economy in the world. When compared to the economies of China and those of other larger ones, India's average Growth rate was recorded high during 2014-15 and 2017-18. As per the consuming power of its people, India was the third largest economy during the said period.

India has to confine herself to the GDP of 6.8% in 2018, due to the decay in development in the sector of Agriculture and its allied wings, commerce, Hotel, transport, warehousing, information and broadcasting, public administration and defense.

For the last five years, after 2014-15 the actual GDP growth rate of our country is 7.5%. In 2018-19, the growth in agricultural sector has been affected, as the area of farming under Rabi season has come down. Issues like reduction is Government final consumption, change in stocks and decay in valuables to led to the decay in GDP rate growth. In 2018-19, In GVA, the share of Agriculture sector and its allied wings is 16.1%, whereas that of Industrial sector is 29.6% and that of service sector is 54.3%, as per the records.

Indian Agriculture has been facing many challenges for some years. Water scarcity and division of agricultural lands into smaller units affected the agriculture produce. The economic survey was of the option that ICT based weather smart farming has to be taken up to achieve stability and growth in agricultural productivity. To improve rural economy, allied sectors like poultry, dairy and aqua should be given top priority. When modern technology is used in food subsidy and food management, food security will be available to all equally.

The GVA growth in 2014-15, in the agricultural sector was very low. In 2016-17, it was 6.3% whereas in 2018-19 it is only 2.9%. During this period, i.e., between 2014-19, there was a downtrend in crop production, animal husbandry and forestry. But in aqua sector, the growth was high, almost three times. Small and marginal farmers depend mostly on agricultural sector, if we observe the data. In nutritional standards, India occupies the first place whereas in food security it stands in 76th place in the list of 113 Countries. This situation indicates that India has to improve her food supply management. The government of India took crucial issues like minimum support price for agricultural products, procurement of Food Corporation of India, its decentralization through state agencies, management of buffer stocks. Steps like selling rice and wheat in the open market were meant to curb inflation. Under the joint responsibilities of states, center and union territories, public distribution system is being implemented effectively. It is the responsibility of the central government to supply food grains to the depots recognised

by the FCI. The state governments identify the beneficiaries for food grain distribution, issue ration cards to them and super vice fair-price shops. In 2018-19, the growth rate of agriculture and its allied sectors was recorded as 2.9%. As per the farmer welfare ministry's third pre-estimations, the total food grain production in 2017-18 was 285 million tons, whereas it came down to 283.4 million tons in 2018-19.

Let us come to the industrial sector. While the industrial growth index recorded 4.4% rate in 2017-18, It came down to 3.6% in 2018-19. Credit flow to small scale and medium scale industries and loan facilities from Non-banking finance companies came down drastically. Crucial sectors like automobiles, pharmaceuticals, machine equipment's were not in much demand. World crude oil prices received a jolt. That is why industrial growth rate was low. To quicken the growth process, the government took up several steps like "make in India", "startup India", flexible, industrial polices reforms in direct foreign investments policy. As per the report of the World Bank Economic 2019, India occupied 77th place among the 190 countries in the world. The economic survey revealed that attracting some trillions of dollars of investments became a challenge, Inspite of Indian investments in infrastructure sector were high. In the manufacturing sector, in 2018-19, the growth rate was recorded as 6.9% in power, gas and water supply, it was 7% and in construction sector it was 8.7%.

In eight crucial sectors like coal, crude oil, natural gas, petroleum refinery products, Indian industrial growth index was at 40.3%. In it the growth rate in the respective industries in 2018-19 was recorded as 4.3%. The role of PSUs (Public Sector Undertakings) has been very significant in Indian economy. By March 2018, there were 339 PSUs. Among them 257 organisations continued their activities and 184 got profits. In 2017-18 the growth rate in their net profits was recorded as 2.29%. In the gross capital mobilization, it was 7.6%. In their banking credit-growth there was considerable progress in 2018-19. Chemicals and chemical products, cement and cement products, engineering industries, construction sectors, infrastructure sector received high credit from the banks.

Even the service sector struck a meager picture in 2018-18. Its growth rate came down to 7.5%, whereas it was 8.1% in 2017-18. In 2018-19, nearly 10.6 million foreign tourists visited India. The share of service sector in the states and union territories was more than 50%. In the GVA of Haryana, Jarkhand, Odisha, A.P. and Uttarakhand, its share became better. In the direct foreign investments attracted by India, Service sector gets 60%. But it came down to 1.3% less in 2018-19. The flow of direct foreign investments was reduced in the fields of telecom, Consultancy Services, Aviation and Navy, resulting in the decay of growth in the FDIs of services sector.

India occupied the 9th place in the service sector in 2917 as per the U. National accounts statistics. Tourism sector is contributing to the growth of GDP, foreign exchange reserves and self-employment, giving boost to the economic growth. India got 28.7 billion dollars of foreign exchange in 2017-19, which came down to 27.7 billion in 2018-19. Indian IT-BPM industry recorded a growth rate of 8.4% getting an income of 167 billion dollars in 2017-18. In 2018-19,

it was estimated to be 181 billion dollars. Its exports value was 126 billion dollars which is expected to rise upto 136 billion dollars.

Even the export import statistics reveal that Indian economy is on a slow pace. Exports never improved but came down by 9.71 %. After eight months, even the imports recorded a decline in their growth. The value of exports was recorded to be 25.01 billion dollars.

Mr. Anoop Vardhaman, Commerce Secretary says that though the exports in June 2018 were at their peak, with 27.7 billion dollars, they came down in the current financial year, due to the base-effect. Global economic instability is also a reason. The Global economic prospect report submitted in July 2019 predicted that global trade and commerce in 2019 will be weak. By 2.6%.

Exports fell down in the fields like diamonds, Jewelry, engineering goods, petroleum products, plastic handicrafts, readymade garments, chemicals, leather, marine products and oilseeds. As the ONGC (Oil and Natural Gas Commission) stopped its production temporarily from 17th April to 28th June 2018, through its ally, Mangalore Petrochemical Ltd, the exports of petroleum products were affected badly. The situation in Jamnagar refinery too is not different. Even the imports are no better, with a decay in their growth by 9%, Their value was recorded as 40.26 billion dollars. By this is the net difference between imports and exports and trade deficit amounted to 15.28 billion dollars; while it was 16.6 billion dollars. The imports of gold improved by 13% and were recorded as 2.7 billion dollars. The crude oil imports came down to 13% and were recorded at 2.7 billion dollars. Non-crude oil imports decayed by 7.35% and fell at 29.26 billion dollars.

This falling trend appeared in the exports of several other countries, these recent months. As per the statistics of International trade organisation the exports of Japan, European union, China and America recorded a decline at -5.88%, -4.30%, -2.75% and -2.12% percent respectively.

Between April-June 2019, Indian exports declined by 1.69% and were recorded at 81 billion dollars; whereas imports by 0.29% at 127 billion dollars. In total, the trade deficit was recorded at 45 million dollars.

According to the data released by the Reserve Bank of India, there was a growth of 15.49% in the services sector, whose exports rose by 15.49% and imports by 22.37%.

In the growth agenda of India, the main factor is social involvement, an amalgamation. The government at the center wants to achieve this through the concepts like "Sab Ka Saath", "Sab ka Vikas" abd "Sab Ka Viswaas". In a developing economy like India, there must be high focus on social infrastructure expenditure; as per the recommendation of the economic survey. It is necessary to raise public sector on human capital. The economic survey mentioned that population utility, improvement in educational standards, training for the youth, growth I skills, employment opportunities, women empowerment etc can contribute much to the future growth of India.

One can notice the rise in public sector investments on the fields of education and health. In 2014-15 it was 2.8% of the GDP whereas it rose to 3% in 2018-19 on education. Similarly, on health it was raised from 1.2% 1.5%. The economic survey noticed considerable improvement in the implementation of social security schemes. There is growth in admissions in elementary education. In middle schools, the dropout rate was more in boys, due to financial problems, lack of interest in them. At an average level, the unemployment rate is 6.1%. It is 5.3% in rural areas and 7.8% in urban areas. The labour power came down from 38.6% to 34.7% during these 7 years span. As per the report of sample registration system 2016, the infant mortality rate was 1000:34. After 2014, 1,90,000 km of rural roads were laid. Under Mahathma Gandhi national rural employment programme, in 2014-15, 166.2 crores of working days were provided whereas in 2018-19, they rose to 267.9 crore.

The economic survey aimed that more importance should be given to sustainable development, housing, reduction of gender inequality in social economic indexes. India should endeavour to achieve permanent growth through her human resources and all pervasive polices.

FEMININE POWER IN ENTREPRENEURSHIP: GOING AHEAD WITH REDOUBLED CONFIDENCE

Dr V. Sree Jyothi, Faculty of Aurora's Business School, Hyderabad
(She can be reached at sreejyothi@absi.edu.in)

Abstract

In this male dominated world, generally women lag behind in every sphere of life. People think that business field is not an exception. But many business women are proving this to be a misconception for most enthusiastic Indian Youth, to be an entrepreneur is a manifestation of the great startup dream. They want to find an idea that solves a need, take the risk, work hard and become rich. Women are in no way interior in this aspect. They are also part of the game, the treasure hunt. More than 14 % of all startups, mostly in technology, in India have women founders and co=founders. More than 50 % of the entry technology jobs in the country are being grabbed by women. This article introduces such promising women entrepreneurs, their modus-operandi, their achievements etc, so that women students of management education get inspired, to follow the same enlightened path. The writer of this article is highly indebted to "The Economic Times' which published an extensive success stories of such women, in its issue dated 30.04.2019.

Keywords

Startup world, Cool quotient, Gender bias, Artificial intelligence, Data warehousing, automation, E-learning, Vision computing, Chat interface, Data testing, Resonance.

Times are changing rapidly. There has been a rising cult of women tech founders. In the start-up and tech world, previously it was a man's world, with sexual superiority and gender bias; where women who are the part of the technology world, who now play a prominent role as professionals or founders of companies has suffered from these biases.

"Happy Shappy" is one of India's fastest growing social-commerce companies. Sana H Sood is the co-founder of the firm. Once a venture capital investor asked her bluntly what does she do. It is an absurd question which is insulting too for Sood who co-founder the company with her husband, Nitin, a former World Bank Consultant. The guy who asked the question might not have known about the capability of Sood as a successful entrepreneur who spent a decade in the United States, working with global firms like PWC and the Gate group. Later the wife and husband shifted to India in 2016, with their two children to launch startup on their own. She is also an author whose blogs are popular among business circles. In her blogs she writes about her experiences as an entrepreneur. She is also the creative head of the company.

She had some ugly experiences too. An investor texted her a message asking her whether her husband was asleep. He was ruthlessly removed from the list of their investors. Another problem faced by women entrepreneurs is the dearth of women employees in their firms. Mrs.

Sood faced a business problem in her company. The company helps its users find new life style and fashion products, buy them or mark them on the platform to purchase later. Sood and her husband are building a layer of artificial intelligence (AI) which will help users discover products they desire using image recognition. Her husband could not have solved the discovery problem and identifying the right products all by himself. If Mrs Sood had not assisted him.

"Happy Shappy" demonstrates what women perform: click pictures, do window shopping, short lists products and create multiple wish lists. AI can not perform everything. For many tasks, the human mind needs to be put at work. It takes much time to explain her tech team the work on the app. A woman's mind has to be applied. But she is not bothered by technology because theirs itself is a technology company. She knows full well who exactly their users are. So technology does not daunt for her.

Soods thoughts are reflected by many female entrepreneurs. 'Cashkaro' is the largest affiliate marketing company whose clients are Flipkart, Amazon and more than 1000 other commerce companies. Swati Bhargava, the co-founder of the company faced the same problems as Mrs. Sood did. She complains that investors enquire her husband Rohan about the tech stack and her about the number of workers in the company. She traces back roots of the bias against women in the Indian society itself. She is highly educated and qualified, who did her under-graduation in Maths and Economics from the London School of Economics.

The academic background of Smt Swati Bhargava was interesting. She hails from a small town, Ambala. She got a scholarship from the Singapore government to pursue her higher secondary from abroad. Her parents and well-wishers were alarmed much, as to how a teenaged girl would go all the way abroad, all by herself. But she proved her mettle by successfully completing her education and securing a job at Goldman Sachs in the U. K. She was the junior most and the only woman in her team. But over years, she has become one of the poster children of women in tech in India.

Deals company My Dala was launched nearly 10 years ago by Anisha Singh who was the CEO and founder of the firm. She says that in those days at every conference on women, technology and start-ups, there were some regular four to five women. But at present, we can draw inspiration from many women entrepreneurs. Asha Singh was motivated by Julie Holdren, President and CEO of Olympus group, a data warehousing concern. Asha received internship training from Julie Holdren who was almost a demi God for her. She ran a company with a broad insight into technology. Physically too, she was very fit. She could do 30 pushups at a stretch. Asha craved to become like Julie. She achieved 25 pushups at a time. Asha was always ahead of others in talent as well as performance. She took her P.G. Degree in Management in IT. She served in an e-learning company initially. She accomplished design integrations of two systems to communicate with each other. Women of such caliber were rare in those days. She was eagerly sought after by unmarried boys for marriage. Elderly people wanted her as their daughter in law. To avoid such embarrassing situations, she used to wear a cheap engagement

ring, to ward off unwanted attention. In those days e-learning was in high demand. Very few women were found in that field. Anisha Singh was always surrounded by men.

It is not the case with women entrepreneurs only. Even the young tech professionals are the victims of indecent and flirtatious advances. Barkha Sarma, CEO and Founder of Bash. ai, faced some uncomfortable situations with her boss who remarked that she looked sexier with her hair open etc. Their company provides artificial intelligence based human resource solutions. She experiences this gender bias more as a professional than as an entrepreneur. Women, she says were confined to office work whereas men could travel abroad. One of the reasons assigned to the downgrading of women in professionalism is that they are inferior to men in understanding the technology. But Barkha Sarma proved this notion to be false. She can code and understand business pretty well. Her insight is explicit when he says that their product automates mundane hard work. Human beings can act with empathy, creativity and formulate new polices effectively. They can understand the psychology of the customers whereas bots can do only file work, raising tickets and complaints. Sharma is a forerunner in the future technology like vision completing. By this solution, the companies can safely do way with the swiping machines for recording the attendance of their employees, at the very entrance of the office and mark attendance. Though Sharma hailed from an ordinary town, Sitarganj in Uttarakhand, she could get herself immersed in the tech world easily.

There are many such women who have explored and built companies around Al-enabled bots. Morph.ai, AceBot.ai and Kontikilabs are a few of them. They have one thing in common. They are part of Facebook's women in tech initiative called "She Leads Tech". Mr. Satyajeet Singh, Head of Platform partnerships, facebook India and South Asia reiterated that in can change inequality in the start-up ecosystem and provides women founded or co-founded start-ups access to stools, mentership and resources which help them overcome some of the barriers they face and build a successful business in technology. 'She Leads Tech' has 596 members across 87 cities and 30 women mentor. The organisation guided several members in scaling their business, strengthening their products by extending its resources and creating marketing strategies, to reach their customers. Facebook mentors start-ups who have no ample financial resources and provides technical support to them including ad credits, tools credit and service credits from premier partners like Animoto, Angel List and Strip.

Even the number of women in coding and software has been increasing steadily. During 1950-1980, for three decades, coding was being done by women basically because it was aimed that women can do more justice to software development, than men as it was a gloried clerical job. Santanu paul Co-founder and CEO of "talent sprint" aimed that women were displaced by the system gradually as men hired more men through referral based hiring processes. 'Talent Sprint' is a digital upskilling and boot camp platform. It joined hands with Google to provide scholarships to 600 girls in software courses.

Morph.ai is working on suggestive AI, to get more value out of marketing chatbot. Nityati Agarwal, Co-founder of morph.ai says that they will help in convincing the customer to buy a

product they are aware of the company's timings, when online/offline, what is the drop rate, conversion rate etc. They help brands generate more ROI out of their marketing expenditure.

Sameera Vanekar founded Ace Bot.ai to give users a better experience online by removing pop-ups and embed on AI-enabled chat interface with which the user interacts at his own discretion. She says that they took the chatbot technology and customized it for the marketer so that the user experience is not broken, But she is astonished by the gender-bias, even here, which she experienced when she worked with no less brands like HP and IBM, She stresses that more and more women entrepreneurs are needed to bridge the gap.

Payal Chakraborthy is the founder of Kontikilabs, which concentrates on natural language procession, deep learning and machine learning. Once someone enters the internet and entity, they run an algorithm and then create the bot to perform better to get the desired outcome.

Those who study the industry are of the opinion that the number of women in AI and data science is increasing. Women want to build up an aspiration value. Even when they are on maternity leave, they keep on upgrading themselves, by taking up technology courses, as Ishan Gupta, India M. D of Udacity has put it in an online training platform.

Shakun Sethi, founder of Tickle life, a technology platform for sexual problems, where users can come in person and discuss their sexual problems, lost all her data as her head of technology did not buy enough space in the cloud to run a beta testing. Sethi wants to combine tech and wellness. She fired the man who was responsible for the disaster. This failure has made her more of a techie than she would ever have become.

While some women non-tech founders are becoming tech savvy, some founders are taking up new challenges.

INTERNET OF THINGS (IOT):
A REVOLUTION IN THE MANUFACTURING SECTOR

Prof. P. N. S. Datta Sarma, Aurora's Business School, Hyderabad
(He can be reached at dattasarma1956@gmail.com)

Abstract

Internet of Things is the latest development in IT, which is transforming the traditional methods of manufacturing companies which are stepping into highly inter connected agile network entitles, brought together by IT systems. The next remarkable invention is 4.0(I-4.0) model. It is structured by a combination of cloud computing, wireless connectivity, Artificial intelligence and CIM (Computed Integrated Manufacturing). The IOT provides the required automation. It uses various sensors to collect data and feed the same into an interconnected grid which monitors production. The I-4.0 will be based on IOT to a large extent. It is a net work of highly intelligent computers, devices and objects which collect and share dat. This article is confined to the manufacturing industry only. The Industrial Internet of Things (IIOT) uses IOT technologies in manufacturing, with the help of automation and data exchange with I-4.0, the IOT is indispensable to generate, collect and analyse the data. IOT plays a significant role to establish a well-connected manufacturing firm. It makes optimisation and reduction of waste in all stages of production possible. The writer of this article is highly indebted to Prof R Jayaraman, SPJIMR, Mumbai, Mr Avisek Basu, Accenture, Bangalore and Mr Suryadiptha Chakraborthy, Accenture, Bangalore who provided inspiration through their research paper, "IOT and the future of Manufacturing Industry", Published in "Indian Journal of Computer Science" May/June 2018. This is a humble Endeavour to introduce the concept of IOT to the students of management in simple terms.

Keywords

Big data, Operations value chain, Optimization, Manufacturing environment, Supply chain, Inventory management, Performance measurement, Smart inventory, Cloud servers, Smart manufacturing solutions, Ecosystem.

The world is awaiting the new innovative technology, I-4.0. With its adoption, the manufacturing companies can take the advantage of the developments in the fields of Artificial Intelligence, big data, cloud computing and storage, IOT, Internet-based connectively and super speed computing to create more efficient functioning of organisations; so that they can address the needs of the market. The IOT can be used to promote seamless manufacture with fully integrated operations, using data analytics and Artificial Intelligence. It leads to a clear understanding of the dimensions of I-4.0. It proposes a system architectural features at three levels of its use in a manufacturing environment.

In a manufacturing company, there are three chains of activities. They are 1. In bound operations, 2. In company operations, 3. Out bound operations. The first one refers to the

manufacturing and related activities of a company. The first and the second together are called the "Supply Chain", known as the upstream and the downstream part of the company's value network.

The OVC (Operations Value Chain) of any two companies cannot be the same. In a non-IOT setup, the PPC(Production Planning Control) department of the company integrates different wings of the company integrates different wings of the OVC into a working whole. But in an IOT structure, many of the manual functions are performed by IOT devices. The following elements in the OVC are amalgamated by the IOT system architecture. They are

1. Smart procurement, 2. Automated warehouse management, 3. Retail Inventory management, 4. Smart after-sales service, 5. Out bound logistics planning, 6. Empanelment of strategic supplies and venders and their performance monitoring, 7. Cost control.

Smart inventory implies an IOT set-up for automation and operational efficiency. Its management can be classified into 3 levels. They are

1. In company level (One distribution centre of a company)

2. Supply chain node level (an aggregation of all Dcs)

3. Aggregate level (An aggregation of all companies operating in a supply chain)

The smart inventory links all the three levels in each block of operations. The IOT minimizes/optimizes inventory levels, to provide the best services to the customers.

At company level, it will be a network of sensors, bridges, routers and local data servers, which are centrally managed, designed and operated by a central entity, the IT wing. At the supply chain level, it is a network of routers from different points of the company's network nodes connecting into a cloud. It will be connected to routers from different geographical location of venders, strategic suppliers, external storage locations, warehouses as well as the global positioning systems of the on route transport vehicles. At the aggregate level, there will be a network of companies from different points of the supply chain network belonging to different geographical locations. They will connect to the internet and share a common portal which only this network of companies can access. Here a wider geography is covered with a larger base of applications, a variety of decision rules and various kinds of AI applications, enabling the computers to take proper and quick decisions based on the data collected from the various cloud servers.

The Global giant, Intel is using IOT for building smart manufacturing solutions to tap data from many sources and to analyse it for smarter, faster and better informed business decisions. Thus the old traditional way of the manufacturing process in Intel has been changed to smart manufacturing which has resulted in the increase of connectivity. Using analytics, it derived actionable intelligence.

Through the application of IOT Technologies and big data analytics in its factories, Intel

yielded the flowing solutions benefits. They are

1. Increased manufacturing throughput: Shortened planned maintenance enabled the production line to run for longer periods. Preventive maintenance measures reduced the number of routine part replacements.

2. Improved efficiency: Good units are identified from defective units using image analytics, mush faster than the manual method.

3. Reduced Downtime: with the adoption of planned maintenance and preventive maintenance tool failures are avoided, identifying the worn parts.

To adopt IOT technologies, the manufacturing companies have to incur cost of sensors, RFIDs, infrastructure and peripheral devices, software development, data storage capacity development, integration with analytics applications, software installations and implementation, training personnel. Besides these the companies have to bear the cost of low productivity during the operationalisation period. They have to sustain the loss of working hours of sales and of quality/performance during the migration process.

At the same time IOT provides the following benefits. They are

1. By dint of increase in fill rate, customers satisfaction and service level sales increase considerably.

2. In logistics, the distances are reduced resulting in cost savings.

3. Smart procurement and reduction in under stocking of RM, cost is saved.

4. Process efficiency is increased and operating cost is reduced.

5. Because of predictive maintenance and increased utilization of machines, greater productivity is achieved.

The future of IOT is very promising. There will be 34 Billion IOT network devices by 2020 with 24 Billion IOT specific devices and 10 billion traditional devices. This indicates that there will be a big potential market in future, with more and business firms and government organisations adopting IOT. But there is also a hidden threat for IOT, of increased propensity which the hackers and vested interests are likely to breach.

Basically, there are four main objectives of developing an IOT ecosystem to run the manufacturing companies. The first is improving customer services by keeping them happy by meeting their demands. The second is lowering operating cost. The third one is increasing throughput and productivity. The last is expanding into new markets and creating new product offerings to the customer.

In future, the following developments are likely to occur in IOT technology. Developers and software architects can create ecosystems which can inter-connect millions of devices, with the development and testing of new algorithms and software architecture. Proliferation of IOT

systems and devices will lead to growth in companies which manufacture IOT devices. Special skill sets will be necessary to develop, administer and maintenance the IOT systems because the IOT ecosystems will require an altogether different mindset to collect, communicate process and analyse a large amount of data. Hence new service providers to manufacturing industry will thrive in the fields of low-level device control and operations, IOT data acquisitions and management and IOT application development.

There will be new analytics approaches as large amount of data will be available for every manufacturing company, in-house analytics capability will become necessary, in future. AI based systems by which productions planning, resource allocation and MRP can be automated will be developed by companies, integrating them with the IOT systems.

Another progress will be that companies will be protected from supply chain risks like Cargo theft or inventory pilferage, through accurate tracking of Cargo and goods, item level tagging and container level tracking. Finally, sensors at product level will be able to ensure correct quality parameters. If there are any discrepancies, warning signals will be generated and corrective system will come into action.

However, there is the opposite side of the coin. Hackers can cause damage to the companies, by attacking IOT systems through malwares which inflict DDOS (Distributed Denial Of Services), throughout or in a part of the system. Hence the manufacturing companies must be equipped with more secure systems not sustain the losses from advanced cybercrime.

To conclude, IOT is a network of intelligent computers, devices which collect and share huge amounts of data. The present article throws light on IOT, in connection with the manufacturing industry only. The I-4.0 is going to be a new era, with the current trend of automation and data exchange with the advent of I-4.0, the need of generating, collecting and analysing data has increased considerably. This need wiil be addressed by IOT which plays a significant role in setting up a well-integrated company, brining new possibilities for optimization and reduced waste in all stages of production.

References:

1. N. Joshi, "What's IOT doing in Manufacturing?" 2016(online)

2. M. Loffler and A. Teschiesner, "The Internet of things and the future of manufacturing", MC Kinsey & Company (Online)

3. Wikipedia "Super computer" (Online)

4. Smart manufacturing leadership coalition "Smart manufacturing- A New Ind. Revolution" 2014.

Call for Papers

Auroras Journal of Management (AJM) a quarterly publication of the Aurora's Business School, Hyderabad, India, is a journal addressed to managers in the industry, the government and nonprofit organizations. It aims at disseminating results of research studies that are of relevance to their jobs and capable of being applied at their work-place. AJM provides a combination of scholarly research papers and papers that are conceptual and application-oriented. It does not confine itself to any one functional area, but invites articles relating to all areas of management, marketing, finance, organizational behavior, and human resources, operations, etc. The journal also features articles on various sectors like industry, agriculture, banking, international trade, urban and rural development, public systems, and information systems cutting across functions.

AJM welcomes high quality papers on management, business, and organizational issues both from academicians and practitioners. Papers based on theoretical/empirical research/ experience should satisfy the criteria for good quality research and show the practical applicability and/or policy implications of their conclusions. All articles are first screened at the Editor's level, and those considered of sufficiently high quality are double blind refereed by reviewers who ensure a high standard of academic rigor in all the articles.

Authors can submit their contribution for consideration under any of these features:

- Research Articles which present emerging issues and ideas that call for action or rethinking by managers, administrators and policy makers in organizations. Recommended length of the article, not exceeding 7,500 words.

- Book Reviews which covers reviews of contemporary and classical books on management.

- Articles on social, economic and political issues which deal with the analysis and resolution of Managerial and academic issues based on analytical, empirical or case research/ studies/ illustrations. Pl

Please send your articles to: Editor
Aurora's Journal of Management
Aurora's Business School
Dwarakapuri Colony
Hyderabad - 500 082. India
You may also mail
your papers/articles to sreenivas@absi.edu.in

Guidelines for Submission of Book Reviews in AJM

The following is the suggested format for authors:

- Length: 3500- 5000 words or 10-12 Pages

- Paper Title should be brief

- All authors' Title (e.g. Dr, Mr, Mrs, etc.) & Name, Affiliation, Email etc

- Abstract (not more than 250 words) and Keywords

- Introduction / Background / Objective

- Literature Review

- Methodology, Findings, Analysis & Discussion

- Conclusion, Limitations and Recommendations

- References - Harvard or APA Style is required.

- Tables, figures, etc. in their appropriate location in the paper (if applicable)

- Margins: 1 inch or 2.5 cm.

- Font: Times New, 12 points

- Spacing: 1.5 between lines and 2 between paragraphs