

THE CHALLENGES OF ENTREPRENEURSHIP IN INDUSTRY 4.0: A CASE OF ALIGARH DISTRICT IN UTTAR PRADESH

Meenu

Research Scholar, Mangalayatan University

Abstract:

The fourth industrial revolution or industry 4.0 is impacting on the smart environment for entrepreneurship. The changes arising from the digital revolution in the production and value creation process are radical and pose a real challenge to enterprises. Companies need to develop strategies in good time to exploit the new challenges and the possibilities of digitalization, to improve established processes and develop new business models. The industrial 4.0 also impact on industrialization for Aligarh through information technology, internet, autonomous, integrated products and services, ecosystem of intelligence, entrepreneurship wants to use all technologies which help to solve the current challenges in new path that were not thought before. This paper mainly focused on upgrade technologies in Aligarh. It also explores the impact of fast-growing technologies on the transformation of socioeconomic and environmental systems, and technological change can generate sustainable economic growth and employment. It also explores the fast growing technologies on the transformation of socio economic and environment system.

Keywords: Industry 4.0, Entrepreneurship, Technologies, Challenges, Environment, etc.

Introduction

Many years have passed and now we are standing on the cusp of another Indian revolution. The fourth industry revolution or industry 4.0 has become quite energized. Worldwide economy is ready to adopt it and India is also trading its path in its own way.

- The First Industrial Revolution has started in the mid of 1760 to 1840 about 18th century by James Watt who made new Mechanization through water and steam power. Through using machines of water wheel and steam engine helps to skilled artisans for making goods by hand. The transition was the most popular in the textile industry, but the effects of the first industrial revolution was felt in almost every aspect of daily life. So, that was industry 1.0.
- The Second Industrial Revolution has started in end of 19th and starting of 20th century about 1870 to 1914 by Henry Ford's who invented the mass production and assembly lines powered by electricity. The second industrial revolution was better to do new using

technologies with improving existing ones.

- The Third Industrial Revolution has started in 1970 to 20. The computerization system and automation system was produced. These progresses brought changes in the scale to enable levels of precision and accuracy introduced at the bottom of the world.

Industrial revolution	Basic Facts	Time Period
1.0	Mechanization	1760-1840
2.0	Mass Production	1870-1914
3.0	Computerization	1970-20??
4.0	Now --	

- Currently, the Fourth Industrialization Revolution is the smart modest route that sometimes called the future factory, which is the main foundation of the fourth industry revolution. The fourth industry revolution smart modest route includes extensive use of data exchange and autonomy

in monitoring processes, including areas likely- advanced analytics, cyber system, artificial intelligence (AI), internet of things (IoT), cloud computing, etc. the effect of several manufacturing companies in India has started implementing the power of the fourth industry revolution in the operation. The fourth industry revolution today's digital India in made in India. For example, today some of the few manufacturing factories are deploying advanced data analytics in some other way's some of which are also using additive manufacturing, autonomous and robotics. The fourth industrial revolution is the unsurpassed way of production which is creating new ways, as well as new technologies in India, is called industry 4.0.

Indian economy with the high demographic benefit is being seen as a one of the world's fastest growing economies. Here, with the average GSDP (Gross State Domestic Product) growth rate of 7% for the last 3 years (2014-2017), India has remained the

world leader. Moving forward the vision of the government of India, the Uttar Pradesh government has declared its industrial investment and employment promotion policy in 2017, which will lead to dynamic progress and investment in industrialization in the state. Uttar Pradesh is third economy and has the largest consumer market with more than 200 million populations. In Uttar Pradesh, 262 Prime Minister are at the Indian project centers which is the largest of the all the states. Uttar Pradesh is one of the top five manufacturing states of India and swelling in the state is the second largest number of Small and Medium Enterprises. India's Agriculture is the great source of Uttar Pradesh for its residents and along with agriculture; Aligarh is also famous for an industrial sector. Aligarh is a district of Uttar Pradesh (India). It is mostly known as a university town where the famous Aligarh Muslim University is located, it is also well known district internationally because of its locks industry.

Entrepreneur: it means a person who create new venture are called entrepreneur.

Entrepreneurship: it is a process of creating; designing, launching, new venture is called entrepreneurship.

Role of entrepreneurs in business:

- 1) Initiator
- 2) Risk taker
- 3) Reduce risk
- 4) Allocator
- 5) Adhering to the legal norms
- 6) Forecasting

Entrepreneur plays a vital role in a financial growth and standard of living of the country.

These are the six top most roles an entrepreneur that helps to developing the growth of the industry as well as country. Under the fourth industrial revolution the entrepreneurship

process works like- horizontally as well as vertically with the help of internet that can manage actual time.

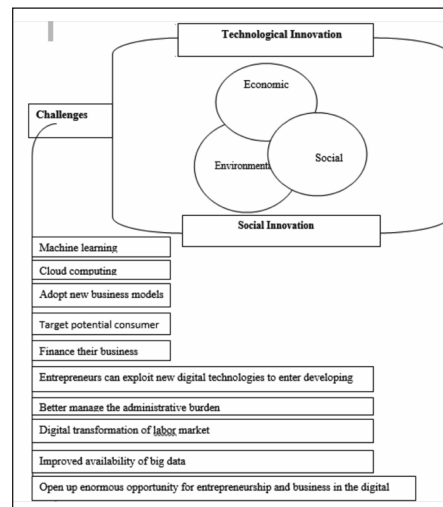


Figure 1: Challenges of Entrepreneurship for Industry 4.0

The fourth industry revolution sustains to keep change the way we connect with the world around us, and then new challenges grow. So here are many challenges-

- 1) **Machine learning algorithms:** The machine learning period often changes incorrectly with artificial intelligence but learning the machine is actually an area of artificial intelligence. Machine learning is often also considered as pre- estimated analysis or prediction modeling. Machine learning use algorithms programme which receives input data and analysis to predict output values with in hunting range. Because these data is fed to new data, they learn and optimize their operations to improve the developing intelligence overtime. There are four modus of machine learning algorithms-

- Supervised learning
- Semi- supervised learning
- Un-supervised learning
- Enforcement learning

Actually choosing the right machine learning algorithms

depends on many factors like- data size, diversity, quality and also wants to answer the data with the data drive. It also comprises data points, accuracy, parameters, training time, and so on. So choosing the right algorithms is the combination of experimentation, business need, time availability, specification. Can say machine learning algorithms are a cheat sheet that will help you to find one of the most suitable for your specific challenges.

- 2) **Cloud computing:** The word cloud computing was famous by Amazon.com who released its elastic compute cloud product in 2006. The phase reveals cloud computing in the beginning of 1996 which is mentioned in a Compaq internal document with the first moon. Cloud computing has been used to represent the network of computer devices in the original. The main focus of cloud computing is to permit users to take advantage from all the technologies without knowing any expert knowledge about toadying. The main phase of cloud computing is to cut costs and help users to focus on their main business as obstacles to buying hurdles. For cloud computing the main technology is virtualization. This virtualization software helps to provide the duration required to speed ups its operations and overcome the cost by increasing infrastructure utilization. Automated automation computing process through which users can manage resources on demand. Reduction of users partnership automation increase the process, labor cost decrease and the likelihood of human error is reduced. The cloud computing utility computer leverages the

concepts, so that metric software services can be used. Cloud computing concept take from service oriented architecture (SOA) which can helps to all users to break all phase problems into services can be integrated to the solution. Cloud computing provides all its research in the form of services and allow access to well established standard and best practices to access the cloud service in a global and easy way to obtain. ASO's domain cloud computing also leverages the concept of utility computing that provides metrics for services to be used. Cloud computing also confers the tools and technologies to make intensive parallel application with suitable prices comprised to traditional parallel computing techniques. There are three types of cloud computing-

- Public cloud (operate by third party cloud service provider).
 - Private cloud (cloud computing used exclusively by a single business or organization).
 - Hybrid cloud (combine public as well as private cloud together).
- 3) Adopt new business model: A business model is a conceptual surtax that helps the provision of a product or industry and involves the goals and purpose of the industry and how it intends to obtain them. A business processes and policies adopted by the industries are the part of business model. Thus, a business model is a rational description of our industry, which delivers itself as well as the value for the customers. The widespread use of business model came in to being with the advent of a personnel computer, which allows the people to test

and model different components of the business. Before that successful business model was mostly made by an accident, not by the design. In industries there are only two business model- the first part deals with product design and manufacturing and second part of business models related with everything regarded to product selling by finding the right customers to sell the product. The types of business model-

- Manufacture
- Distributor
- Retailer
- Franchise
- Bricks and clicks
- Fermium
- Subscription
- High touch
- Low touch
- Aggregator

4) Target potential customer: Under the fourth industries revolution, there is one of the biggest challenges faced by small industries owners are informing that are talking to his target market. With the limited funding -fund, it is necessary that you talk your prospects with the right people. It may seem obvious that there are so many industries owners those who do not give a little thought about who will buy their products or services before starting their distribution, but without some main steps information and knowledge how can you grow a business successfully in the market. So firstly define these steps like-

- Define your target market: It is clear that firstly you define your target market and also having a clear concept of your target customers that will helps industries to set marketing activities that are targeted and also cost effective.

- Reach near target market: Now you have to consider how you reach your target audience spent time and profiles in your target market, that will helps to find out steps as much easier than need to maximize the target market investments "fish where a fish is".
- Identifying what type of customer they are: The main aim of this industries owner's is that to search about all types of customers with each description outreach.
- Tailor your marketing to your customers: By using the marketing make sure that your marketing budget has the most impact and is more likely to go to the high value sales and loyal customers coming to the home. So can say dedicating time to specifying the main target market that will support in much focused, most effective in marketing activities for gained better return investments.

5) Finance their business venture: Putting all the eggs in a basket is not a good trade strategy in future. So that is main truth comes when it comes to the finance in your business. While presenting the accounting track and financial information of your industry. Industry finance will help you to manage your money and to make your operation more useful. There are typical sources of financing for startups-

- Personnel investment
- Angles
- Business incubators
- Love money
- Venture capital
- Government grants and subsidies
- Bank loans

6) Entrepreneurs can exploit new digital technologies to enter developing markets: Social, mobile, analytics, cloud, cyber system, etc. are the main phenomena which can be helpful to leveraging the new digitalization technologies in such a way. These all support to creating and doing much business in the digitalization era. Digitalization entrepreneurship can be explain as embracing by a order to improve business operation, new business models accelerate business intelligence in high intensity with the use of new digital technologies and connect with customers and interest holders through new channels.

7) Better manage the administrative burden: Owners of industry want to produce more work. Although they are trying to forget the amount the dealing with administration workers, productivity has a direct impact. In fact, there is an important situation to reduce less paper work more efficiently which helps to overcome the administrative burden. By the help of fourth industry revolution, lots of industries is dreaming of a simple and more efficient administration that helps to reduce workload and positively contribute to the quality of each customers relationship.

- Use cloud base specialty HER software.
 - Avoid postponing task.
 - Billing should be outsourced.
 - Seek the advice of a mentor.
 - Prioritize and delegate.
 - Hire competent staff.
- These helps to manage the administrative burden shapely.

8) Digital transformation of labor market: Recently digital changes

have happened in India and a lot has been said deservedly. The so-called fourth industrial revolution has become an in effective rule for the last few years. Undoubtedly, this digital conversion promises to challenging and stimulating process for organization whose aim is to increase their productivity and performance to meet with their business models or goals. Cultural change, consequences are playing the lead role to transformation of labor market. Digital transformation is the main which is entering in a new era vision they have influenced by labor or customer trends and daily life. Now a day's digital transformation is stronger than ever and it will surely have a big impact on industries, economic and societies in the future.

Through digital transformation, many industries have adopt new tidies, into their business strategy to trace their consumers needs, desire and more effectively.

9) Improved availability of big data: The term of data availability is used by computer storage manufactures and storage service providers (SSP) which describe the products and services that as certain that data regularly to be available at a expected level of the performance in conditions ranging from normal through disasters. Integrity, confidentially non-reproduction and integrity information assurance are the main five pillars of availability of data. But information assurance is the one of the main part of availability. Information assurance affected with the storage, which can be at an official facility or can be local.

10) Open up enormous opportunity for entrepreneurship and business in the digital age: The internet is the main part of the digital era which made many tools and techniques to traditional entrepreneurs and it help also an opened ups new place to do business. Entrepreneurial activity is one of the main factors of digital environment. There are no lower or starting capital needed. There are several self employed people who take the internet to create portfolio careers. There are the internet is full with lots of opportunities to hiring the skills, search new market, export, work from home, it helps to people to attracting and making different types of choices related with how they work, the rapidly growth of entrepreneurs has connect with digital age.

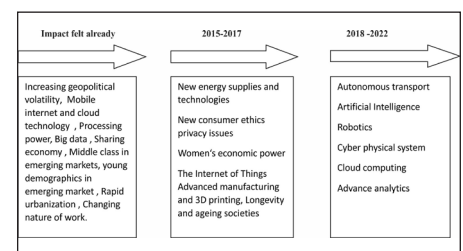


Figure 2: The Biggest Impacts On Entrepreneurship Industry 4.0 Models

The fourth industry revolution or Industry 4.0 is consign to the main changes impacting the logistics, supply chain, and manufacturing industry. However, the fourth industry revolution consign as the assessment of a smart factory. However, the fourth industrial revolution impacting across lots of sectors. Under this research, there are some main and biggest impacts that matter on industry 4.0 –

- Reduction in the need for human labor is also necessary for a different skill set of force.
- Real time information and better decision making.
- Improved quality and improved innovation.

- The ability to understand what the customers really want to do.
- On demand manufacturing and customization.

Conclusion

We do not have to wait for the fourth industry revolution we already have between them. Its major technologies are in use now a day. Few sectors are using these advance technologies in their enterprises. Now the fourth industrial revolution is better than before. Can say, it is the key of success. The fourth industrial revolution will change the whole enterprise's modest route for future development, and economic growth also. It helps to leading global industries. It is the time of imagination and progress in enterprise sharply. In India, the fourth industrial revolution will help in- Storage system of resources within the cyber system, Innovation in the enterprise helps to emulate, Individual progression, Progress of the network and automated, Unique technologies will transform the whole world, Industries will connect their machines, Smart self-tuning for an enterprise, Communication and interaction with the people, enterprise, customer and industry, different types of products and machines, better industrial processes in production and new ways of working are the main origin of fourth industrial revolution in India, which helps to use unique technologies, changing in industrial environment overcoming the challenges.

References

- <https://www.sagesoftware.co.in/blogs/what-does-industry-4.0-revolution-means-for-manufacturingindustry>
- <https://www.proschoolonline.com/blogs/what-is-industry4.0and-in-India-prepared-for-the-change>
- Entrepreneurship in India: a global perceptive, Dr. Anand Kulkarni, <https://www.quies.com/entrepreneurship-India-global-perceptive/>
- Industry 4.0: building the digital enterprise, <https://www.pwc.in/assets/pdfs/publications/2016/industry-4.0-building-the-digital-enterprise.pdf>
- <https://www.wibof.org/states/uttarpradesh.aspx>
- <https://www.sas.com/en-gb/insights/articles/analytics/machine-learning-algorithms.html>
- <https://www.en.wikipedia.org/wiki/cloud-computing>
- <https://www.talentedladiesclub.com/articles/four-simple-steps-to-defining-and-reaching-your-target-market>
- <https://www.smallbusiness.chorm.com/meaning-business-finance-4108.html>
- <https://www.journals.elsevier.com/technological-forecasting-and-social-change/call-for-papers/digital-entrepreneurship-creating-and-doing-business-in-the>
- <https://www.searchstorage.target.com/definition/data-availability/>
- <https://www.engineering.com/advancemanufacturing/articlesID/16521/what-is-industry-4.0-anyway.aspx>
- Fundamentals of entrepreneurship by H. Nandan.
- Entrepreneurial of development by Dr. S.S Khanka.
- S. Jayadatta, (2017), Major Challenges and Problems of Rural Entrepreneurship in India, *IOSR Journal of Business and Management (IOSR-JBM)*, E-ISSN: 2278-487X, p-ISSN: 2319-7668, Volume 19, Issue 9. Ver. II., PP 35-44.
- Ganly Kate, Mair Johana, (2009), Social entrepreneurship in rural India: A small step approach towards institutional change, Occasional paper-169 E, IESE Business school- University of Navarra.
- Opafuno O. Zacheus, Adepoju. O. Omoseni, (2014). *The Impact of Small and Medium Scale Enterprises on Economic Development of Ekiti State*, Nigeria, ISSN 2222-1700 (Paper) ISSN 2222-2855 (Online), Vol.5, No. 16.
- <https://www.talentedladiesclub.com/articles/four-simple-steps-to-defining-and-reaching-your-targetmarket/>
- Business development bank of Canada (IA) <https://www.bdc.ca/en/articles-tools/start-buy-business/start-business/pages/start-up-financing-sources.aspx>
- <https://www.small.business.chron.com/meaning-business-finance-4108.html>
- <https://www.sagesoftware.co.in/blogs/what-does-industry-4.0-revolution-mean-for-indian-manufacturing-industry/>
- <https://www.aligarhclassified.com/index.pdf/aligarh-history>
- <https://www.en.wikipedia.org/wiki/economy-of-uttarpradesh>

SUBSCRIPTION ORDER FORM

Please accept the enclosed Demand Draft No.....dated.....drawn on.....Bank in favour of Asian Business School payable at New Delhi for Rs..... towards the subscription of "**ABS International Journal of Management**".

Name.....

Organisation / Institute.....

Mailing Address.....

.....

.....

City.....Pin/Zip.....Country.....

E-mail.....

Mail to Editor-in-Chief

ABS International Journal of Management,
Asian Business School,
Marwah Studios Complex II,
Plot A2, Sector 125,
Noida – 201303
INDIA.
Tel.: 0120-4594200

GUIDELINES FOR AUTHORS

ABS International Journal of Management of Asian Business School, Noida invites original and research based unpublished papers in the area of management. This journal publishes papers of interest to academic researchers and industry practitioners. It encompasses all the areas of management. Papers are hence accepted for publication on the understanding that these papers contain original unpublished work, not submitted for publication anywhere else.

- The paper should be typed in MS Word.
- Title of the paper should be followed by full name, e-mail, contact number, affiliation(s) of the author(s).
- Font: Main Body – 11pt., Heading 18pt., Style – Times New Roman.
- Manuscripts: Should be upto 4000 words (A-4 size, typed 1 paragraph spacing, 11 point font).
- An abstract of about 200-250 words must be present.
- Tables and Figures: To the extent possible, tables and figures should appear in the document near/after where they are referenced in the text.
- The paper must start with an introduction and subsequent sections should follow.
- The paper must end with a conclusion summarizing the findings of the paper.
- Referencing: It is the author's obligation to provide complete reference and follow a specific referencing style.
- Editor reserves the rights to modify and otherwise improve the manuscripts to meet the Journal's standard of contents, presentation and style.
- The Editorial Board reserves full and unfettered right and sole discretion to accept or refuse a Research Paper/Article/Case Study for publication; they would be under no obligation to assign reasons for their decision.
- Authors may revise the Manuscripts, if necessary, before the papers are accepted for publication.
- All Manuscripts and Editorial Correspondence should be addressed to

Editor-in-Chief

ABS International Journal of Management,
Asian Business School,
Marwah Studios Complex II,
Plot A2, Sector 125,
Noida – 201303.
INDIA
Tel.:0120-4594200

ABOUT ASIAN BUSINESS SCHOOL

Asian Business School popularly known as ABS was established with a vision of providing "Growth with Education". The mission of Asian Business School is to establish well researched and pragmatic business practices to enable the students to meet the challenges of a fast changing business environment in the new world economic order. Asian Business School aims at developing conceptual and practical skills to convert abilities of students into managerial competence, required in today's competitive environment.

We at Asian Business School strongly believe that a blend of relevant knowledge, skill and right attitude is essential for the overall development of students which determines their growth & success in the corporate world.

Asian Business School is one of the leading B-school in the country that offers full-time AICTE approved management programmes, with specialization in marketing, finance, human resource and information technology. The school also offers post graduate diploma course in Media and Entertainment.

The core advantage of studying at ABS is to get an internationally recognized qualification, by the finest academic minds who impart holistic knowledge through innovative teaching methodology. The support from the industry is immense in the form of internship and job placements. Asian Business School has international tie-ups with reputed institutions like Oxford Business College, Oxford, UK, Winchester University, Universities of Central Lancashire, Northumbria University, Academy of Arts University, Deakin Universities, that tends to provide an international edge to its students.

Asian Business School curriculum focuses on enhancing its students' capabilities so that they can manage and lead, by ensuring that they learn to adopt a systematic approach in identification of business problems, their solutions and use their analytical, problem solving and decision making skills to deal successfully with management issues across a range of functional areas.



Approved By AICTE, Ministry of HRD, Govt. of India
Marwah Studios Complex II, Plot A2, Sector 125, Noida - 201303
www.abs.edu.in