

# Empirical Study on Technopreneurship and Technology Based Companies in India

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**Abstract:- The problem of unemployment can be solved by providing more employment opportunities. Entrepreneurs are the one who provides employment for the people. Culture of entrepreneurship forms an important infrastructure in developments of states. Various types of Entrepreneurs are running their businesses in several fields according to their interests. Techno-entrepreneurs are one among. A techno entrepreneur creates a product or solution that uses technological solutions to change the way of doing something in an orthodox way. It improves how we have done something before and how it has to be done in the coming future. This paper provides the information of techno entrepreneurship and also provides the status of technopreneurship in India. It discusses about the top techno entrepreneurs of India like Paytm, Flipkart, Ola, swiggy and few other and also their contribution to the country.**

**Keywords:-** *Techno-Entrepreneurship, Innovation, Smart Life, Economic Growth, Employment Opportunities.*

## I. INTRODUCTION

In the early period of 21st century, India faced an unbreakable problem called “unemployment”. Many youngsters and degree holders with high potential skills are also unable to find a provisional job position. If so, they are not able to grab the correct salary for their effort. Indian government also made some initiative actions to solve unemployment in India. But, all the steps taken by the government leads it to the failure path. The young generations of India are helpless and restless with anger and blames the government that, they are useless and having no idea about to solve this issue (Kanchana, 2013). The officials were framed so many prospects, even though the problem was unsolvable one. In this occasion, the government concentrates more on the entrepreneurship education and also focuses on the main branches of the entrepreneurship stream. By this way technopreneurship, edupreneurship, social entrepreneurship, argopreneurship were developed with most advancement features. For this, the government receives financial assistance and manual support from Reserve Bank of India. By this, the entrepreneurship education was introduced with several offers and opportunities. Consequently, the technopreneurship education was exclusively provided in the form of training programmes, awareness campaigns, together exhibitions, competitions for the public and entrepreneurship

events. (Paramasivan, C., & Selladurai, M. 2017). In our nation most of the people hearing the word technopreneur as very first time (Paramasivan, 2016). But this is an oldest one when compared with our neighbour nations. United States and United Kingdom has started the technopreneurship process obviously in the 20th century. United States and United Kingdom has offering more opportunities to their technopreneurs from the very beginning. The developing countries like Malaysia, Singapore, Philippines, Iran etc., conducting a degree course called technopreneurship to their higher studied students. But in India, it is a new theme and it takes some sufficient time to reach the society. Ministry of India provides more promotional campaigns to induce the entrepreneurs to become a technopreneur. Indian ministries and department of science and technology jointly conducting many training and awareness programs to promote the entrepreneurial activities across the nation. Technopreneurship education is a new breed to train the entrepreneurial ventures in the technological world. Entrepreneurship education is so familiar to the peoples, but the term technopreneurship is so fresh and very new concept to the peoples (Rituparna Basu, 2014).

Technological innovations have created new opportunities and difficulties for country's economic development (Yunos, 2002). Technological innovations are possible by a skilled and qualified entrepreneur who is capable of bringing an idea to market. To characterize new businesses that combine entrepreneurial abilities and technology, many literatures use the terms "technology-based entrepreneurs," "technical entrepreneurs," "high technology entrepreneurs," or even "high tech new ventures", "technopreneurs". Technopreneurship is a hidden concept found at the core of many fundamental topics. Technology entrepreneurship is a vehicle that promotes prosperity in individuals, businesses, communities, and nations. Beyond satisfying intellectual curiosity, the study of technology entrepreneurship thus serves as an important function. Technopreneurs are business owners who specialize in technology-based industries and use technology to develop new or innovative goods through a commercialization process. Their enterprises are characterised by high growth potential and a high rely on intellectual property and knowledge. Technopreneurs should have both technical and business knowledge. A technology-based entrepreneur establishes a new technology-based firm, and apply technological innovations to create successful products or services. (Florida and Kenney, 1988; Dahlstr and Lindholm,

1999; Renko, Autio and Tontti, 2002; Oakey, 2003; Kakati, 2003). Countries have developed and implemented support mechanisms and programmes to encourage techno-entrepreneurship. Jean Babtiste Say used the concept of entrepreneurship in the economic literature in the mean we use today. According to Say, entrepreneur is the one who produces needed goods by bringing all production factors together and undertakes the risk for the profit it will gain in return. Say wrote in his work named as “A Treatise on Political Economy” (1803) that the profit entrepreneur gained and the profit of the capital are apart from each other. French economist Nicolas Baudeau stated that the entrepreneur represent an innovative person who aims maximum profit with cost minimization by making various innovations (Örnek, A. S., & Danyal, Y. (2015)).

➤ Objectives

- To understand the role of techno-entrepreneurship in economic growth of India.
- To know the social contribution of techno-entrepreneurs in making the life easier.

**II. LITERATURE RIVIEW**

Shane & Venkataraman (2003), see technological entrepreneurship as processes within entrepreneurial organizations during which, entrepreneurs, organizational resources, technological systems and strategies for achieving the opportunities are applied.

Dorf & Byres (2005), define technological entrepreneurship as a business leadership style, which includes identifying technological opportunities with high growth potential, gathering resources such as capital and

experts, and finally managing the rapid growth and its significant risk by exploiting special decision-making abilities.

Petti (2009), suggests two basic features for technological entrepreneurship: potential future benefit, and extreme uncertainty. According to him, technological entrepreneurs intend to create and acquire economic value by excavating and exploiting technology-based solutions (Peng & Zhang, 2008).

According to kırım (2010), the source of employment and economic growth is new entrepreneurship (techno-entrepreneurship). Startups assumed as new enterprise are predominantly stated as techno-entrepreneurship in official records. Techno-enterprises are technology-oriented and high growth-paced enterprises. For example according to the statistics of USA Census Bureau, big part of net employment in the country in 25 years period between 1980-2005 came from corporations that are younger than 5 years. It is estimated that if there had not been new entrepreneurial corporations called as “start-up”, the same term employment increase would be negative. Also India samples have similar results. Innovation and new entrepreneurship are factors that increase the employment and economic growth. (kırım, 2010:18)

Banerjee (2015), had explained that innovation is gaining prominence in all kinds of economic activity around the world. Not only advanced economies but also developing nations are finding that innovation is one of the main drivers of economic growth. This renewed understanding of the significance of innovation is having a growing impact on the course of policy formulation in many countries.

**TABLE-1: A review on the topic techno-entrepreneurship**

S.no	Name of the article	Name of the author	year	findings
1.	How techno-entrepreneurs build a potentially exciting future. <i>Handbook of research on techno-entrepreneurship</i>	Schumpeter	1934	put the emphasis on entrepreneurs as those who, in opposition to traditional capitalists (who exploit existing resources, fields and activities), engage in new activities or ventures that did not exist before.
2.	Techno-entrepreneurship education: Teach and train the youths. <i>Asian Journal of Management,</i>	Lalkaka	2002	defined technological innovation as the process that drives a concept towards a marketable product or service.
3.	Entrepreneurial characteristics in Switzerland and the UK: A comparative study of techno-entrepreneurs. <i>Journal of International Entrepreneurship</i>	Kelley and Rice	2002	techno-entrepreneurs do have to pay attention to the problem of matching technology-based solutions with market current and future needs, expectations and constraints.
4.	Increased importance of entrepreneurship from entrepreneurship to techno-entrepreneurship (startup): provided supports and conveniences to techno-entrepreneurs in Turkey. <i>Procedia-Social and Behavioral Sciences</i>	Shane & Venkataraman	2003	Defined technological entrepreneurship as processes within entrepreneurial organizations during which, entrepreneurs, organizational resources, technological systems and strategies for achieving the opportunities are applied

5.	Techno-entrepreneurship education: Teach and train the youths. <i>Asian Journal of Management</i> ,	Dorf & Byres	2005	defined technological entrepreneurship as a business leadership style, which includes identifying technological opportunities with high growth potential, gathering resources such as capital and experts, and finally managing the rapid growth and its significant risk by exploiting special decision-making abilities.
6.	Perception of entrepreneurial orientation and emotional intelligence: A study on India's future techno-managers. <i>Global Business Review</i>	Peng & Zhang	2008	He defined technological entrepreneurship as follows: "the method and process of discovery, exploitation, and exploration of market opportunities for technologies".
7.	Identifying effective factors on technological entrepreneurship in Iranian nanotechnology SMES. <i>Information Management and Business Review</i>	Petti	2009	said that Technological entrepreneurship could in fact be considered as an important alternative for individuals and firms entering new markets or new business fields.
8.	How techno-entrepreneurs build a potentially exciting future. <i>Handbook of research on techno-entrepreneurship</i>	Brcic and Brodar	2012	had discussed the role of technology parks as generators of entrepreneurship development.

Schumpeter (1934) put the emphasis on entrepreneurs as those who, in opposition to traditional capitalists (who exploit existing resources, fields and activities), engage in new activities or ventures that did not exist before. He emphasized how entrepreneurs explore new opportunities in order to build a new world order while deconstructing the old one, thus allowing capitalism to constantly reinvent itself.

Peng & Zhang, (2008) define technological entrepreneurship as follows: "the method and process of discovery, exploitation, and exploration of market opportunities for technologies". Technological entrepreneurship is comprised of two concepts: "technology" and "entrepreneurship". Technology is defined as "theoretical and practical knowledge, skills and tools for creation and development of products and services" (Burgelman, Christensen, & Wheelwright, 2004).

Lalkaka (2002) defined technological innovation as the process that drives a concept towards a marketable product or service. This holds true as it contributes towards raising productivity and competitiveness (Lalkaka, 2002).

Petti (2009) said that Technological entrepreneurship could in fact be considered as an important alternative for individuals and firms entering new markets or new business fields. The market position of individuals and firms is determined by commercialization of technologies rather than business or trade (Peng & Zhang, 2008).

Brcic and Brodar (2012), had discussed the role of technology parks as generators of entrepreneurship development. Technology parks represents infrastructure in which it is easier for small enterprises to overcome difficulties inherent in the initial start-up period.

Nystrom (1990) opinions that in the new millennium, the development of hi-tech information technologies continues at an unprecedented pace. High-tech markets can be described as marketing dependent and technologically driven, highly internationalized and competitive (Bürgel et al. 2001), complex (Rosen et al. 1998), and under rapidly changing technological conditions with short life cycles (Davidow 1986). High-tech startups and technology development firms, also known as techno-entrepreneurs, play an important role in developing and commercializing technologies worldwide (Kropp and Zolin 2005). These firms are integral to many industries including artificial intelligence, biotechnology, software, and the telecommunications (Zahra 1996).

Kelley and Rice (2002) believe that these firms rely on technology as a key strategic resource that can be used to develop a competitive advantage through innovation. Techno-entrepreneurs do have to pay attention to the problem of matching technology-based solutions with market current and future needs, expectations and constraints. It implies that entrepreneurs have to gather information on the users' wills and constraints regarding the innovative solution and to interpret this information to gain access to a potential market (Kaish and Gilad, 1991). Techno-entrepreneurs need to decide which technological options and applications to develop without much reliable information about customers' future expectations and behaviours as these latter are most often even unaware of the existence of a potential new solution.

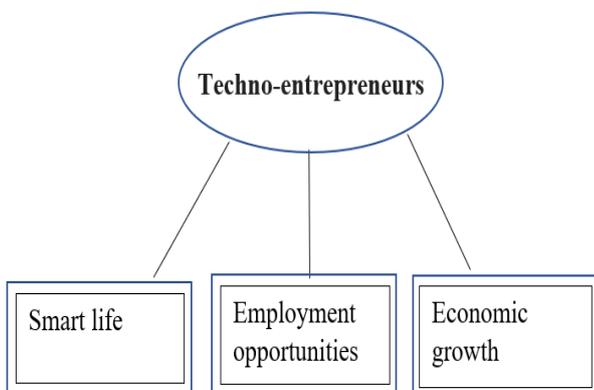


Figure-1: Attributes of Techno-Entrepreneurship  
(SOURCE: prepared from the literature review)

#### ➤ Information About Ola - Taxi Service Provider

Ola needs no introduction. The first Indian cab aggregator company, Ola has made availing of cab services a smooth experience. Owned by ANI Technologies Pvt. Ltd. and formerly known as Ola Cabs, Ola was launched in December 2010 by two IIT Bombay graduates. Ola bridges the gap between cab owners and commuters. Instead of buying and renting out its own cars, Ola partners with a number of taxi drivers and owners and adds a touch of modern technology to the whole setup. This allows people to book cabs at a short notice through Ola's app. Ola is India's homegrown ride-hailing app with a little less than 50% market share (as of Uber's 2020 report) in India. It has users

in over 250 cities of India and employs 2.5 million+ driver-partners. Driven by a hyperlocal approach, Ola is committed to its mission of building mobility for a billion people. Staying in line with its mission, Ola has also ventured into auto and bike booking services. Ola also started off a bicycle sharing service called 'Ola Pedal' in 2017 to facilitate last-mile connectivity (Shubham Kumar). Ola taxi service providers made our lives way easier. When you choose these convenient taxi services over buying a new car; you will save yourself from struggling for a parking space, there will be no more getting into tough social interactions, and best one, you won't have sleepless nights due to the hike of petrol and diesel prices.

#### ➤ Information About Swiggy

In 2013, the two founders, Sri Harsha Majety and Nandan Reddy, designed an e-commerce website called Bundl to facilitate courier service and shipping within India. Bundl was halted, and was rebranded to enter the food delivery market. At the time, the food delivery sector was in turmoil as several notable startups, such as Food panda (later acquired by Ola Cabs), TinyOwl (later acquired by Zomato) and Ola Cafe (later closed) were struggling. Majety and Reddy approached Rahul Jaimini, formerly with Myntra, and founded Swiggy and parent holding company Bundl Technologies in 2013. The company built a dedicated delivery network and grew rapidly, primarily driven by the focus on logistics and locking in key resources. Over the past four years, the food and restaurant landscape has evolved fast and the disruption, which many of us have witnessed and participated in, happened due to a reason. With increased Internet penetration, higher disposable incomes and rising consumer awareness, we are turning to technology to manage some of our most basic needs, including food. Consequently, food delivery aggregation has emerged as a new category, driven by the need for a convenient and reliable experience. After all, consumers want their food to be delivered as soon as possible, at any time of the day and anywhere they wish, at the touch of a button. So, Swiggy has invested in overhauling the supply chain, generating more food options, taking end-to-end control of the entire food delivery process and most importantly, used technology as a lever to revolutionize the culinary habits of all Indians, one meal at a time. Over the past three years, traditional delivery players have seen a twofold growth in the number of orders while the pure-play food delivery segment has witnessed 900 times rise. The numbers are quite telling and paint a picture of the bullish growth in the segment. A few months ago, when Swiggy surpassed a million orders on a single day, it was clear that the next phase of food delivery had arrived.

### III. RECOMMENDATION

From this paper we recommend that innovations should be made and there should be a rise in the entrepreneurs who move the business world forward. Techno-entrepreneurship is one of the best way which makes the lives easier with the smart technologies. So therefore, techno-entrepreneurs should be encouraged to develop the world.

#### IV. CONCLUSION

This paper concludes that techno-entrepreneurship solves one of the biggest problem of India i.e., unemployment. Techno-entrepreneurs use technology and make innovations that make a change in economy. When new inventions come, employment opportunities will be increased and they also contribute to the economic growth. This paper also provides the reviews of authors on techno-entrepreneurship. It discusses about how technopreneurship leads to the economic growth and also how it helps in making the human life smarter. It also shows the success stories of OLA & Swiggy and how they lead to economic growth.

#### REFERENCES

- [1]. Adeoti, J. O. (2019). Technopreneurship and national development: Powering Businesses and the Economy with New Technologies. *Nigerian Institute of Social and Economic Research*.
- [2]. Fowosire, R. A., & Idris, O. Y. (2017). Technopreneurship: a view of technology, innovations and entrepreneurship. *Global Journal of Research In Engineering*.
- [3]. Örnek, A. S., & Danyal, Y. (2015). Increased importance of entrepreneurship from entrepreneurship to techno-entrepreneurship (startup): provided supports and conveniences to techno-entrepreneurs in Turkey. *Procedia-Social and Behavioral Sciences*, 195, 1146-1155.
- [4]. Paramasivan, C., & Selladurai, M. (2017). Technopreneurship education: Teach and train the youths. *Asian Journal of Management*, 8(4), 1173-1176.
- [5]. Pakrad, M., & Kazemi, R. M. (2012). Identifying effective factors on technological entrepreneurship in Iranian nanotechnology SMES. *Information Management and Business Review*, 4(8), 461-466.
- [6]. Pradhan, R. K., & Nath, P. (2012). Perception of entrepreneurial orientation and emotional intelligence: A study on India's future techno-managers. *Global Business Review*, 13(1), 89-108.
- [7]. Tajeddini, K., & Mueller, S. L. (2009). Entrepreneurial characteristics in Switzerland and the UK: A comparative study of techno-entrepreneurs. *Journal of International Entrepreneurship*, 7(1), 1-25.
- [8]. Motohashi, K. (2015). Comment on "Different Impacts of Scientific and Technological Knowledge on Economic Growth: Contrasting Science and Technology Policy in East Asia and Latin America". *Asian Economic Policy Review*, 10(1), 67-68.
- [9]. Blanco, S., & Therin, F. (2007). How techno-entrepreneurs build a potentially exciting future. *Handbook of research on techno-entrepreneurship*, 1, 3-25.