

## THE ESSENTIALS ROLE AND CHALLENGES OF TECHNOLOGY IN MODERN ENTREPRENEURSHIP

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### Abstract

*With the development in the 21st, technology becomes a crucial part of the world. Technology plays a vital role in modern entrepreneurship, enabling innovation, streamlining operations, expanding reach, and facilitating data-driven decision-making, ultimately empowering entrepreneurs to create and scale successful businesses. This paper gives light on the role of entrepreneurship in development of the India. In today's fast-paced and interconnected world, technology plays a vital role in almost every aspect of our lives. One area where its impact is particularly noteworthy is in the field of entrepreneurship. Technology has revolutionized the way entrepreneurs start, manage, and grow their businesses, opening up new opportunities and transforming traditional business models. We know that Entrepreneurs are the important pillar of our nation, its leads to the industrialization, generation of employment, rural development, technological development, nation Development, Export promotion, contribution in national income. Entrepreneurship is important for economic growth and development because it creates jobs, stimulates innovation, and develops local economies India has a robust venture capital ecosystem, with several domestic and international venture capital firms investing in India. Entrepreneurs are important to market economies because they can act as the wheels of the economic growth of the country. This paper examines motivations to become entrepreneurs. Entrepreneurship is a catalyst for structural change and institutional evolution.*

**Keywords:** Entrepreneurship, Entrepreneurship Challenges, Opportunities, growth, technology

### Introduction

Entrepreneurship is important for economic growth and development because it creates jobs, stimulates innovation, and develops local economies. Entrepreneurship involves turning ideas into reality by combining resources to create products or services. Beyond generating profits, it drives innovation and boosts economic growth. Successful entrepreneurs identify market gaps, take calculated risks, and continuously adapt to changing business environments. Entrepreneurship has played a pivotal role in economic development and innovation across the globe. Historically, entrepreneurship has been perceived as a key driver for job creation, economic growth, and societal advancements. It is the process of designing, launching, and running a new business, which often starts as a small business and pursues opportunities without regard to resources currently controlled. In the past decade, a remarkable transformation has occurred in the entrepreneurship landscape, primarily fueled by unprecedented advancements in technology and innovation. Technology, as the application of scientific knowledge for practical purposes, and innovation, referring to the introduction of novel products, processes, or ideas, have been instrumental in reshaping business operations, strategies, and markets. They have acted as catalysts, enabling entrepreneurs to enhance their capabilities, reach, and impact, thereby contributing significantly to the evolution

of diverse industries and the global economy. Technological entrepreneurship is a style of business leadership that involves identifying commercial opportunities, gathering resources, and managing rapid growth and significant risk.

### Review of Literature:

Role of Technology entrepreneurship is more than one might think, given present use of the term, which focuses on acquisition of technology as device. Technology acquisition in the form of routine capabilities concerns not only devices, but their use. Role of Technology entrepreneurship entails substantial institutional work in the promotion of device use through associated routines. Technology entrepreneurship must attend to the dual developmental paths of devices and routines, and promote their convergence. The absence of path convergence may explain why a technology fails to be taken up as expected despite the promotional efforts of technology entrepreneurs. Technology entrepreneurship, as we would understand it, then, seeks to bring new technology to an industry, profession, or occupation. This is quite different from business entrepreneurship, in that it is more social and institutional in nature, and less focused on a firm's product and profit potential. It is concerned with more than new business. It entails a form of what is termed institutional entrepreneurship. Entrepreneurship refers to an individual or a small group of partners who strike out on an original path

to create a new business. An aspiring entrepreneur actively seeks a particular business venture and it is the entrepreneur who assumes the greatest amount of risk associated with the project. As such, this person also stands to benefit most if the project is a success.

### Research Methodology

The information collected for the study was collected by primary and secondary data. Research methodology in the role of technology in entrepreneurship can include a variety of methods, such as data collection, analysis, and visualization. The research study is a descriptive study and the data was collected from entrepreneurship using questionnaire.

The variables used are socio-demographic variables, reasons for stress and the strategies they use to cope up with entrepreneurship. Research on role of technology can use a variety of methodologies, including experience sampling, cortisol measurement, and surveys.

Present review is based on review of literatures and on the analysis of news reports published online and/or in print editions. Literature review Identify existing research on role of technology in Entrepreneurship. Review studies on the Importance of technology, its impact on Business and productivity.

**Research Design-**The research design for this paper will be descriptive and analytical.

**Data Collection:** The data for this research paper will be collected using secondary source such as academic journals, reports, and publication related to Entrepreneurship development in India.

### Objectives of the study

- To understand how technology can support entrepreneurship.
- Understand the role of technology in entrepreneurship.
- Understand the challenges of technology in entrepreneurship
- Understand how entrepreneurs use technology
- Understand the development of technology entrepreneurship.
- Understand how technology entrepreneurship affects socio-economic development

### Hypothesis

India's economic growth has been impacted by its role of technology in entrepreneurship

It encompasses a wide range of tools, techniques and approaches that can be used to identify and solve problems, develop new business models and improve operational efficiency.

Hypotheses about the role of technology in entrepreneurship may include:

### Technology choice:

The choice of digital technology to influence entrepreneurship may vary between urban and rural areas, and between regions.

### Technology and firm performance:

There may be a significant relationship between technology advancement and firm performance.

### Technology and new businesses

New technology-based firms may contribute to economic vitality through exports, employment, taxes, research and development, and innovation.

### Technology and entrepreneurship:

Technology may support new types of entrepreneurship

### Data Analysis

Analysis of the data for Role of Technology in Entrepreneurship which is based on following points:

In the dynamic world of business, technology is not just a tool but a powerful ally for entrepreneurs seeking innovation and efficiency. From streamlining processes to expanding markets, modern technologies play a vital role in all stages of the entrepreneurial cycle. Technology is a powerful ally for entrepreneurs in all niches and sectors. By embracing available technological innovations, modern visionaries can not only optimize their existing operations but also explore new horizons of growth.

Technology plays a key role in entrepreneurship by enabling innovation, cost-effectiveness, and scalability.

### Change in the use of digital technologies by business Functions

Sr No	Particular	Percentage
1	Production Planning	20
2	Supply Chain	30
3	Payment Method	40
4	Service Delivery	45
5	Business Administration	46
6	Sales	50
7	Marketing	60

Table 1: Change in the use of digital technologies

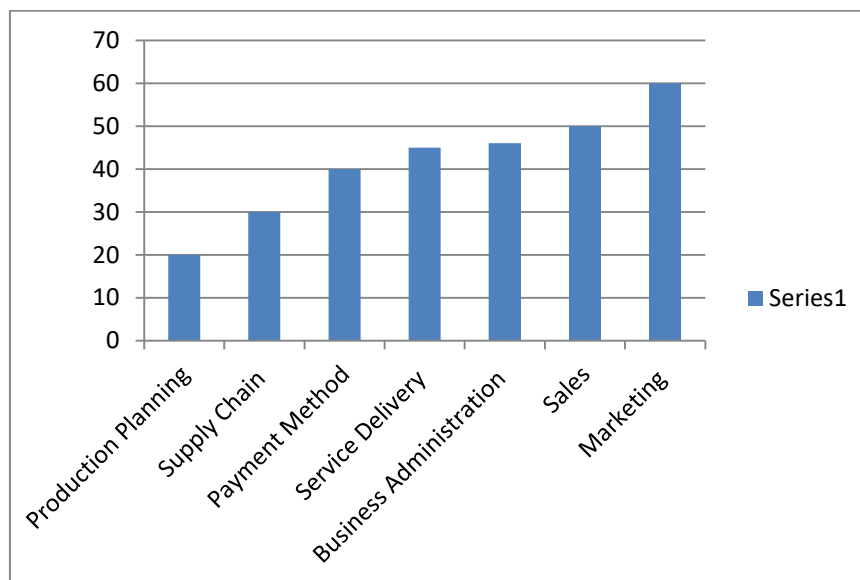


Figure 1: Change in the use of digital technologies

Technology can help entrepreneurs:

- **Innovate:** Create new products, services, or processes
- **Scale:** Reach a global audience and expand their business
- **Be cost-effective:** Reduce the need for expensive physical infrastructure
- **Make informed decisions:** Use data analytics to understand consumer behavior and market trends
- **Streamline operations:** Use automation to streamline administrative tasks
- **Build a strong online presence:** Use social media marketing to reach and engage with customers
- **Collaborate:** Use remote teams and digital tools to work together
- **Identify and solve problems:** Use technology to identify and solve problem.

**The main attributes of Entrepreneurship are as follows:-**

**Innovation:** Entrepreneurs often introduce new ideas, products, services, or processes to the market. Innovation is a driving force behind entrepreneurial activities, helping businesses stand out in competitive environments.

**Opportunity Recognition:** Entrepreneurs are adept at identifying opportunities in the market. This might involve recognizing gaps or inefficiencies that can be addressed with a new product or service, or capitalizing on emerging trends.

**Risk-Taking:** Entrepreneurship involves taking calculated risks. Entrepreneurs invest their time, money, and effort into a new venture, recognizing that success is not guaranteed. The ability to

manage and navigate risks is a crucial aspect of entrepreneurship.

**Resource Management:** Successful entrepreneurs are skilled at managing resources efficiently. This includes financial resources, human capital, and other assets. Effective resource allocation is essential for the growth and sustainability of a business.

**Networking and Relationship Building:**

Establishing connections with other entrepreneurs, investors, mentors, and industry professionals can provide valuable support, guidance, and opportunities. Networking is essential for gaining insights, accessing resources, and fostering collaborations.

**Role of Technology In Entrepreneurship**

**Innovation and Product Development:**

Technology enables entrepreneurs to rapidly prototype and develop new products and services. Digital tools and software allow for efficient design, testing, and iteration. 3D printing, virtual reality (VR), and augmented reality (AR) technologies facilitate product visualization and design improvements.

**E-Commerce and Online Marketplaces:**

E-commerce platforms enable entrepreneurs to reach a global audience and conduct business 24/7. Online marketplaces offer convenient channels to showcase and sell products. Drop shipping and fulfillment services streamline inventory management and order fulfillment.

**Digital Marketing and Branding:**

Entrepreneurs leverage digital marketing tools such as social media, search engine optimization, and content marketing to build brand awareness and

engage with customers. Data analytics provide insights into customer behavior, preferences, and campaign effectiveness.

**Remote Work and Collaboration:**

Cloud computing and collaboration tools facilitate remote work, enabling entrepreneurs to build and manage teams across different locations. Video conferencing, project management software, and communication platforms enhance collaboration and productivity.

**Access to Information and Market Research:**

The internet provides entrepreneurs with access to vast amounts of information and market data. This enables informed decision-making, competitive analysis, and identification of emerging trends. Social media platforms and online surveys help gather customer feedback and insights for product refinement.

**Scalability and Automation:**

Automation tools streamline repetitive tasks, allowing entrepreneurs to focus on high-value activities. Chat bots, automated email marketing, and customer relationship management (CRM) systems enhance efficiency. Cloud-based services provide scalable infrastructure without the need for significant upfront investments.

**Data Analytics and Business Intelligence:**

Data-driven insights help entrepreneurs make informed decisions. Analytics tools analyze customer behaviour, sales trends, and operational efficiency. Predictive analytics assist in forecasting demand and optimizing inventory management.

**Customer Engagement and Support:**

Technology enables personalized customer experiences through chat bots, AI-powered recommendations, and interactive online platforms. Social media and review platforms offer direct channels for customer feedback and engagement.

**Sustainability and Green Tech:**

Technology supports environmentally friendly practices, such as renewable energy solutions, eco-friendly packaging, and sustainable supply chain management. In essence, technology has become a driving force behind entrepreneurship, enabling businesses to innovate, adapt, and thrive in a rapidly changing landscape. It empowers entrepreneurs to reach a global audience, streamline operations, and create innovative solutions that address evolving customer needs.

**Challenges of Technology in Modern Entrepreneurship****1. Data quality**

One of the biggest challenges most businesses face is ensuring that the data they collect is reliable. When data suffers from inaccuracy,

incompleteness, inconsistencies, and duplication, that can lead to incorrect insights and poor decision-making. There are many tools available for data preparation, duplication, and enhancement, and ideally some of this functionality is built into your analytics platform.

**Data access**

Companies often have data scattered across multiple systems and departments, and in structured, unstructured, and semi-structured formats. This makes it both difficult to consolidate and analyze and vulnerable to unauthorized use. Disorganized data poses challenges for analytics, machine learning, and artificial intelligence projects that work best with as much data as possible to draw from.

**Bad visualizations**

Transforming data into graphs or charts through data visualization efforts helps present complex information in a tangible, accurate way that makes it easier to understand. But using the wrong visualization method or including too much data can lead to misleading visualizations and incorrect conclusions. Input errors and oversimplified visualizations could also cause the resulting report to misrepresent what's actually going on.

**Data privacy and security**

Controlling access to data is a never-ending challenge that requires data classification as well as security technology.

At a high level, careful attention must be paid to who is allowed into critical operational systems to retrieve data, since any damage done here can bring a business to its knees. Similarly, businesses need to make sure that when users from different departments log into their dashboards, they see only the data that they should see. Businesses must establish strong access controls and ensure that their data storage and analytics systems are secure and compliant with data privacy regulations at every step of the data collection, analysis, and distribution process.

**Talent shortage**

Many companies can't find the talent they need to turn their vast supplies of data into usable information. The demand for data analysts, data scientists, and other data-related roles has outpaced the supply of qualified professionals with the necessary skills to handle complex data analytics tasks

**Cost**

Data analytics requires investment in technology, staff, and infrastructure. But unless organizations are clear on the benefits they're getting from an



analytics effort, IT teams may struggle to justify the cost of implementing the initiative properly. Deploying a data analytics platform via a cloud-based architecture can eliminate most upfront capital expenses while reducing maintenance costs. It can also rein in the problem of too many one-off tools.

### Changing technology

The data analytics landscape is constantly evolving, with new tools, techniques, and technologies emerging all the time. For example, the race is currently on for companies to get advanced capabilities such as artificial intelligence (AI) and machine learning (ML) into the hands of business users as well as data scientists. That means introducing new tools that make these techniques accessible and relevant.

### Resistance to change

Applying data analytics often requires what can be an uncomfortable level of change. Suddenly, teams have new information about what's happening in the business and different options for how they should react.

### Conclusion

The concept of technology entrepreneurship constitutes an interesting proposition for enterprises whose aim is to increase its level of innovativeness through a synergistic use of interactions between the internal capabilities of the company and the potential of the environment, represented by research and development institutions and entities from the high-tech sphere. In its underlying assumptions, the concept takes into account the advantages enjoyed by MSE sector companies, such as a high level of entrepreneurship and a market opportunity-oriented approach. However, it also stresses the need to ensure appropriate solutions concerning the distribution of

technological and innovation effects from the scientific area to the sphere of business practice. In conclusion, the symbiotic relationship between technology and entrepreneurship is reshaping industries, creating new opportunities, and redefining the entrepreneurial landscape. As we move forward, the successful entrepreneur will harness the power of technology, navigate its challenges, and contribute to a sustainable and innovative future. Fast technological revolution provides an important opportunity to attain Sustainable Development.

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