

Impact of Technology-Driven Start-ups in Empowerment of Youth in India: An Empirical Investigation

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Abstract

Technology-driven start-ups have appeared as transformative agents, significantly contributing to the empowerment of youth. There is an important part of these start-ups in the innovative sectors like artificial intelligence, fintech, and renewable energy where they are enhancing employment opportunities by generating diverse jobs for youths. Skill-based hiring is prioritised in these start-ups which fosters the economy, offers flexibility and global exposure. "Hands-on learning, access to cutting-edge technologies, and cross-disciplinary collaboration, equipping youth with future-ready capabilities" are skill development drives promoted in these ventures. Technology-driven start-ups empower youth by nurturing culture of innovation, self-reliance, and adaptability which leads to economic and societal transformation, shapes a future-ready workforce and address critical global challenges. Start-ups nurtures entrepreneurship among young population where they provide digital platforms, funding opportunities, and access to mentorship and global networks. They inspire innovation and encourage the entrepreneurial attitude needed to deal with current challenges. A sample of 219 young entrepreneurs from different entrepreneurial sectors were surveyed to explore the factors that shows the Impact of Technology-Driven Start-ups in Empowerment of Youth and found that job creation, skill enhancement, entrepreneurship, and digital inclusion are the factors that shows the Impact of Technology-Driven Start-ups in Empowerment of Youth.

Keywords: *Technology, Start-ups, Empowerment, Youth, Entrepreneurship*

Introduction

Entrepreneurship and empowerment are nurtured by startup India Campaign by generating jobs. Technology driven Startup are playing important role in fostering numerous startup ventures across India. They are creating opportunities for youth and empowering them to pursue their entrepreneurial dreams and contribute to employment generation (Gupta and Raghuvanshi, 2024). The landscape of young population in India is transformed by Tech-startups as they promote entrepreneurship, skill enhancement, and job creation. These ventures are offering platforms for innovation across sectors such as “e-commerce, fintech, health tech, and edtech.” They are addressing skill gaps by the use of advanced technologies and digital learning solutions which in turn ensures the resources accessibility in remote areas. The Startup India Hub which is said to be the keystone of the dynamic and ever-evolving startup landscape is planned as a central platform for the startup ecosystem that facilitates knowledge sharing and access to funding. It plays important part in supporting “marketing, business structuring, feasibility analysis, and management evaluation” (Rao, 2018). Entrepreneurship is encouraged through Digital Startups by reducing the barriers to entrepreneurship and offering mentorship, funding opportunities, and strategic guidance. Startup India and Digital India are Government initiatives that help to foster innovation and encourage self-reliance among the youth. It also contributes to flourish entrepreneurial spirit in the country. There is an important role of Technology-Driven Startups in Employment and Economic Transformation as they contribute to reduce unemployment and generate jobs in technology-centric industries. These ventures empower youth both financially and professionally using technology and introducing innovative products, services, and business models (Giones & Brem, 2017; Nambisan, 2016). Traditional and conventional practices are discontinued by this technology which in turn deliver faster, smarter, and more cost-effective solutions, reshaping industries across the board. Numerous job opportunities like freelancing promotes economic independence among young professionals where tech-startups act as catalysts for economic growth, fosters innovation, self-reliance, and a culture of entrepreneurship in India. They provide youth with platforms to develop entrepreneurial skills essential for national development.

India’s Youth with over 50% of its population below the age of 25 is considered as the Foundation for Economic Growth. Despite their talents, many young individuals remain unaware of their capacity to drive economic transformation. The youth have the power to push the nation’s economy through their precision, skills, and quality work. “Leadership, financial acumen, salesmanship, independence, and cooperation” are the key attributes equip young population through entrepreneurship. This also offers valuable insights into the real workings of the world, fostering personal and professional growth (Fadeyi et al., 2015). Technology is said to be the key driver of innovation in today’s competitive market which works behind a successful business. It helps startups to stay ahead by addressing challenges creatively and introducing solutions that meet evolving market needs. Indian startups are transforming the economic landscape and empowering the next generation of entrepreneurs by digital adaptation. A significant impact of technology is seen as a success factor for startups in the digital era where technological advancements have revolutionized business operations by enhancing their efficiency, boosting productivity, and offering a competitive edge in the market. In today’s digital age, technology has become a foundation that reshapes the traditional practices. Vision and mission with clear objectives and employ effective performance metrics to track progress are the alignments behind the success of any startup (Griva et al., 2023).

Innovation and entrepreneurship act as catalysts for economic growth and are widely regarded as vital drivers of “economic progress, job creation, and equitable service delivery.” There is a significant position of these factors in improving the economy as they pave new ways for sustainable development and growth. The implementation of these principles in startups contributes to economic advancement and societal transformation. In an era of technological innovation and market shifts, adaptability has evolved from an advantage to a necessity. In order to navigate a complex and ever-changing environment, it is important for the startups to redefine the conventional rules of business. Resilience in the face of uncertainty is ensured by the ability of a successful business and to remain agile and responsive to change (Sahut et al., 2022). Startups that prioritize teamwork and foster collaborative environments gain a significant advantage. A diverse team with “varied perspectives, skills, and experiences promotes creativity and enhances problem-solving capabilities.” Strong leadership, combined with a culture of collaboration, drives innovation and ensures that collective efforts lead to sustained success in the competitive digital marketplace. In India, startups have emerged as an important initiative that had fostered innovation and entrepreneurship within Indian economy. They had provided diverse incentives and guidelines and significantly contributed to the growth and development of the country's startup ecosystem. Prakash, Jayasubramanian & Dharun (2024) found in their study about the positive outcomes of digital startups, their expansion in different sectors, job creation, and enhanced access to funding and support systems. Another benefit of these tech start-ups is providing network

platforms that enable young entrepreneurs to collaborate and exchange knowledge. Over all, the initiative supports job creation and drives economic growth, empowering aspiring entrepreneurs to achieve their goals.

Literature Review

Kumawat and Meena (2022) revealed that entrepreneurship generates employment, boosts GDP, and fosters innovation in the business sector. It promotes self-employment and contributes to capital formation, enhances living standards, and increases per-capita income by creating diverse job opportunities. There are numerous government schemes that provide substantial financial support to help individuals to establish their careers while simultaneously stimulates the economic growth of the nation. There are number of opportunities in sectors like tourism, textiles, automobiles, event planning, and more offered by start-ups. In India, the Startup provides advantages such as financial aid, access to government tenders, simplified registration processes, extensive networking opportunities, and income tax benefits. These initiatives act as key pillar that supports the economy by creating jobs and enhancing GDP through a range of incentives for Indian entrepreneurs. Wilson (2019) highlights the significant contribution of startup in India in terms of entrepreneurial growth and innovation. As per the Global Entrepreneurial Index 2018, India secured the 69th position among 137 countries. The success behind these initiatives is credited to factors such as “product innovation, risk acceptance, international outreach, and the emergence of productive startups.” The growing business attitude among youths offers numerous advantages like personal and professional development. On a broader scale, entrepreneurship helps to improve economic growth by increasing “wealth and income, improving access to opportunities, and ensuring better utilization of resources.” Practical experience can be gained through starting small business and managing it. It is seen that if the venture didn’t work then also it provides some valuable learning experiences. Small business also serves as a practical and enriching educational journey for entrepreneurs

Razak and Reddy (2019) observed that for startup entrepreneurs it is tough to secure funding for business initiation, manage day-to-day operations, and expand their ventures. Moreover, startups encounter issues related to marketing and technological infrastructure. It is found that there are several startups and companies get benefits from government initiatives, including the introduction of startup and business incubation policies aimed at strengthening India's startup ecosystem. These policies emphasize on the vital role of government schemes and support startups through mentorship, funding, and other benefits. The Startup India Scheme, in particular, has been involved in helping young entrepreneurs to achieve their goals and provide them funds and guidance through business incubators. Furthermore, these government initiatives enhance transparency, accountability, and efficiency, especially through the promotion of digital payments.

Kamboj (2024) emphasizes how digital adaptation is changing company operations, which improves efficiency, reduces errors, and streamlines processes. Cutting-edge software assists companies in organizing their repetitive chores, giving staff members more time and resources to devote to strategic activities like problem-solving and decision-making. This change boosts productivity and fosters innovation. Additionally, technology enables companies to grow beyond conventional bounds and restrictions. Businesses may now access international markets and reach a larger audience thanks to the growth of the internet and e-commerce, which increases revenue and opens up chances for expansion and diversification. Businesses may interact with clients in real time and overcome geographical limitations by utilizing digitalization, which promotes innovation in fields like "marketing, sales, and customer service." Enhanced communication tools promote “idea-sharing, collaboration, and the development of new products and services, ensuring continuous innovation across organizations.”

Khuan, Andriani, and Rukmana (2023) found the importance of “open innovation, digital transformation, and disruptive innovation” in the success of startups. It is revealed that technology serves as a key catalyst that drives and enable the growth of young population. The dynamic nature of innovation processes which is supported by digital advancements and collaborative approaches helped to transform the strategies startups use to disrupt markets and generate value.

Objective

To explore the factors that shows the Impact of Technology-Driven Start-ups in Empowerment of Youth.

Methodology

A sample of 219 young entrepreneurs from different entrepreneurial sectors were surveyed to explore the factors that shows the Impact of Technology-Driven Start-ups in Empowerment of Youth. This study is based on a survey conducted using a

structured questionnaire specifically designed for this research. The primary data was collected using a “random sampling method,” and “Factor Analysis” was employed to derive the results.

Findings

The table below presents the general details of the respondents where male contributes 56.2% to total study survey population and rest 43.8% are female. 58.0% are below 26 years of age and the remaining 42.0% are above 26 years of age. 44.3% are graduate and below and 55.7% are post graduate and above. 36.1% are in service sector, 28.8% in e-commerce, 23.3% in digital marketing and rest 11.8% are in other digital business sectors.

“Table 1 Demographic details”

“Variable”	“Respondents”	“Percentage”
Gender		
Male	123	56.2
Female	96	43.8
Total	219	100
Age		
Below 26 yrs	127	58.0
Above 26 yrs	92	42.0
Total	219	100
Education		
Graduate and below	97	44.3
Post graduate and above	122	55.7
Total	219	100
Business sector		
Service	79	36.1
e-commerce	63	28.8
Digital Marketing	51	23.3
Others	26	11.8
Total	219	100

“Table 2 KMO and Bartlett's Test”

“Kaiser-Meyer-Olkin Measure of Sampling Adequacy”		.860
“Bartlett's Test of Sphericity”	“Approx. Chi-Square”	3544.695
	“df”	120
	“Sig.”	.000

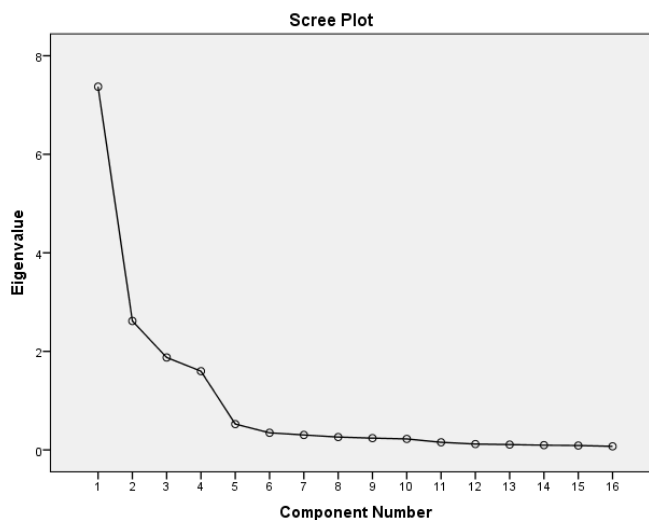
KMO value in table 2 is 0.860 and the “Barlett’s Test of Sphericity” is significant.

“Table 3 Total Variance Explained”

“Component”	“Initial Eigen values”			“Rotation Sums of Squared Loadings”		
	“Total”	“% of Variance”	“Cumulative %”	“Total”	“% of Variance”	“Cumulative %”
1	7.373	46.080	46.080	3.437	21.480	21.480
2	2.617	16.358	62.438	3.390	21.185	42.665
3	1.876	11.724	74.161	3.328	20.797	63.462
4	1.598	9.987	84.149	3.310	20.686	84.149
5	.524	3.278	87.427			
6	.347	2.168	89.595			
7	.304	1.897	91.492			
8	.261	1.631	93.123			

9	.239	1.493	94.616			
10	.223	1.396	96.012			
11	.155	.968	96.979			
12	.119	.743	97.722			
13	.108	.675	98.397			
14	.096	.601	98.998			
15	.088	.551	99.549			
16	.072	.451	100.000			

“Principal component analysis” shows 16 variables from 4 Factors. The factors explained the variance of 21.480%, 21.185%, 20.797% and 20.686% respectively. The total variance explained is 84.149%.



“Table 4 Rotated Component Matrix”

“S. No.”	“Statements”	“Factor Loading”	“Factor Reliability”
	Job and Employment		.942
1	Start-ups introduced roles in emerging sectors	.884	
2	Allows young talent to enter the workforce with practical expertise	.881	
3	Provides freelance and remote job opportunities	.864	
4	Offers global work exposure through digital platforms	.862	
	Skill Development		.937
5	Start-ups expose youth to tools like AI, IoT etc.	.893	
6	Offers learning and hand on training to gain practical experience through innovative projects	.864	
7	Helps to develop soft skills communication, teamwork, and problem-solving	.860	
8	Entrepreneurial Mindset encourage creativity, resilience, and adaptability	.857	
	Entrepreneurship		.929
9	Technology-Driven Start-ups helps to build, market, and scale businesses cost-effectively	.899	
10	Inspire young entrepreneurs to develop unique solutions for market challenges	.893	
11	Fosters entrepreneurial growth by connecting with mentors, investors, and industry experts	.878	

12	Tech start-ups give financial support to young entrepreneurs	.825	
	Digital Inclusion		.929
13	Technology-Driven Start-ups enable youth to connect to the digital world	.875	
14	Bridge skill gaps by offering courses and certifications	.874	
15	Empowers youth with internet access and resources	.849	
16	Ensures informed participation in the digital economy	.822	

Table 4 shows factors representing Impact of Technology-Driven Start-ups in Empowerment of Youth where factor “Job and Employment” includes the variables like Start-ups introduced roles in emerging sectors, allows young talent to enter the workforce with practical expertise, provides freelance and remote job opportunities, Offers global work exposure through digital platforms. Factor “Skill Development” includes the variables like Start-ups expose youth to tools like AI, IoT etc., offers learning and hand on training to gain practical experience through innovative projects, helps to develop soft skills communication, teamwork, and problem-solving and Entrepreneurial Mindset encourage creativity, resilience, and adaptability. Factor “Entrepreneurship” includes the variables like Technology-Driven Start-ups helps to build, market, and scale businesses cost-effectively, inspire young entrepreneurs to develop unique solutions for market challenges, fosters entrepreneurial growth by connecting with mentors, investors, and industry experts and Tech start-ups give financial support to young entrepreneurs. Factor “Digital Inclusion” includes the variables like Technology-Driven Start-ups enable youth to connect to the digital world, Bridge skill gaps by offering courses and certifications, empowers youth with internet access and resources and ensures informed participation in the digital economy.

“Table 5 Reliability Statistics”

“Cronbach's Alpha”	“N of Items”
.921	16

The value of “Cronbach’s Alpha” should be more than 0.07. Total reliability is 0.921 for 4 constructs including sixteen, hence it is sufficient.

Conclusion

Technology-driven start-ups have revolutionized the empowerment of youth by “reshaping employment, skill development, entrepreneurship, and digital inclusion.” These ventures allow new avenues to create jobs in emerging field and foster a workforce equipped with cutting-edge technological skills. They promote hands-on learning and interdisciplinary collaboration and help start-ups to contribute significantly in preparing youth for the demands of an evolving global economy. In terms of entrepreneurship, start-ups inspire young innovators to “think creatively, solve real-world problems, and build scalable solutions.” Access to mentorship, funding, and global networks further empowers aspiring entrepreneurs to transform ideas into impactful ventures. Moreover, digital startups help to bridge the digital divide and ensure inclusive access to technology and resources, mainly in underserved communities and help youth from diverse backgrounds to participate in the digital economy. Overall, technology-driven start-ups serve as catalysts for a more inclusive, innovative, and dynamic future and bring youth in a position to act as key drivers of economic and societal progress. Their ability to foster adaptability, resilience, and self-reliance in young individuals underscores their crucial role in building a sustainable, equitable, and technologically advanced world. By continuing to support and invest in these start-ups, we can unlock the full potential of the youth to shape a brighter tomorrow.

The study was conducted to explore the factors that shows the Impact of Technology-Driven Start-ups in Empowerment of Youth and found that Job and Employment, Skill Development, Entrepreneurship and Digital Inclusion are the factors that Impact of Technology-Driven Start-ups in Empowerment of Youth.

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