A STUDY TO DETERMINE IMPACT OF TECHNOLOGICAL CHANGES ON ENTREPRENEURS

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ABSTRACT

More than the last decades, the trend of technology entrepreneurship has fascinated the researchers today because of its considerable effect on economic development. Today Technology is a boon for individuals and acts as the tool to shape their environment in various ways. Technology entrepreneurship is a medium that augments the progress of individuals, firms, regions, and nations. Technology has given individuals the tools to directly shape their environment in many ways. In this article the authors have studied the impact of technological changes on entrepreneurship. With the help of entrepreneurs, industry and the employees, the authors collected the required data, and then the data was analyzed by using the 5-point likert scale questionnaire. In order to know the impact of technological changes on Entrepreneurship in Rajasthan, data analysis techniques like Frequency Distribution, Descriptive Analysis and Pearson Correlation Techniques are used. Demographic profile of respondents was analyzed like their gender, age, educational qualification, marital status and monthly income. Thus, the authors found that there is a significant impact of technological change and innovation on entrepreneurship. The result thus signifies that technology performs three main roles: it provides innovation in the job to be done; it increases entrepreneurship power and finally yet importantly, it helps in achieving economic development.

Keywords: Technology, Entrepreneurship, Innovation, Technical Changes, Economy.

INTRODUCTION

Innovativeness is taken to be the most important attribute of a business for gaining success and increasing efficiency in present times. It gives a platform to modern businesses to gain an enduring competitive advantage, largely through positive effects as rising excellence and competence, restraining value, increasing purchaser trust, globalization of operations, modernizing management processes and functioning. Innovative technology-based firms and entrepreneurs not only have the possibility of generating new industries, they also promote innovation-sharing with established industries and help in their revitalization. The steady expansion of technology corresponding to total Economy has a significant influence on the potential for increasing modern venture ideas depending on automated knowledge and communication.

This article intends to explore the theme of technology Entrepreneurship pertaining to the companies that are operated entirely on state-of-art technology and internet. It is very common that people living in technological age as well as modern entrepreneurs who are highly passionate to become digital businessmen must work very hard before entering into the e-

business, because, e-commerce need to be organized and thoroughly researched as the new entrepreneurs have to deal with their new e-ventures in several virtual locations, having different patrons, suppliers and competitors.

Technological Change and Innovation

Every technology needs expansion for its development for which an entrepreneur should employ a number of efforts (Braun and Macdonald, 1982). Many entrepreneurs form a combined participation after which a technological change takes place (Usher, 1954). The new opportunities generate only with supportive work of entrepreneurs (Girard and Stark, 2001). Domestic and international firms implement the technical ventures and these ventures are generated through the new and innovative ideas, which create automated ventures to help the entrepreneurs build their businesses into powerful ventures. Innovative concept includes both – the products and the method or process that could be generated through fundamental research and expansion. In the growth of technical invention, small technical venture are in progress to face giant ventures with the aim of stiff competition (Carlsson, 1989). As acknowledged in the economic journalism the participation of technological modernization leads to country's monetary development. (Romer, 1986) in recent times, researchers have analysed the growth of the entrepreneurs because of extemporized technology that results into surplus optimization (Verspagen, 1992; Ruttan, 1997; Johannisson, 1987). Furthermore, additional technological network makes it feasible to look for crucial asset contributors (e.g. savings and knowledge associates and chief patrons), which provide help for the innovative business enterprise in support of advance right to use monetary funds and expertise, supply chains, etc(Chrisman et al, 1998).

In the marketing and business segment Innovation is a growing research area which can be used for the development of the business (Fillis & McAuley, 2000). Discovering innovation around marketing and entrepreneurship shows an apparent image of SME's performance, and with this positive effect, it is providing realistic recommendation for entrepreneurial marketers. The new and ad-hoc businesses are paying attention on logical ability, appropriate decision-making power, optimistic approach, modernism inventiveness and resourcefulness (Carson 1995). In the era of technological business model, technology provides a method for advance examination of modernization through contributing probabilities for examination by extensive research methodologies (Carson & Coviello, 1996) at the same time, as private enterprise and modernization are the basis of monetary expansion, yet investigators tried to maintain a correlation among capitalist action and monetary expansion throughout the country (Acs & Audretsch, 2005).

Current and Future Trends in Entrepreneurship

As in the computerized working situation, a person is able to do the job while sitting at one place (could be a home or office) just connected by the computer through the internet and the person can be a part of worldwide office with his peers located at different places. This could be possible only through technology, hence this is a part of virtual employment. Technical workers can utilize their abilities such as website creation, app developing, software designing and with the help of these, teaching and many other jobs can be done with the help of virtual employment. In the same way, a single user computer with internet accessibility can be connected to the distant worldwide located computers, can interact with the consumers and do business

transactions while operating from one place,. This concept has motivated the entrepreneurs to set up more start-ups with the help of technology.

REVIEW OF LITERATURE

Hussain and associates in 2011 performed a study titled as "Impact of innovation, technology and economic growth on entrepreneurship". The aim of this research is to see how creativity, technology, and economic growth affect entrepreneurial activities. This was accomplished by the use of a correlation and regression model. These variables are strongly associated with the dependent factor "Entrepreneurship," according to the findings.

Dangolani performed an investigation titled as "The effect of information technology in the entrepreneurship (A case study in Golestan province IRAN)". The objectives of this research are to look into the impact of information technology on entrepreneurship in the province of Golestan. The information is gathered from entrepreneurs, the business, and employees. According to the results, information technology serves three distinct but critical functions: IT facilitates job access greatly, IT provides the unique opportunity for work place information easily and IT increases the employment rate significantly via virtual work place especially electronic marketing.

Balachandran & Sakthivelan (2013) studied the "*Impact of information technology on entrepreneurship (e-entrepreneurship)*". According to the findings of their research, the Internet is possibly the biggest scientific and technological breakthrough that our generation has ever seen. It has benefited society in many ways, including cultural, economic, and political. The Netpreneur is a Community premium participant. He contributes to the society by providing jobs. Venkatesh and associates performed a study in 2017 titled as "*Networks, technology, and entrepreneurship: a field quasi-experiment among women in rural India*". They discuss a major economic issue that women in rural India face and role of ICT. The findings show how social networks and ICT usage interact in a complex way. For links to family and culture, the amplification effect is such that women with high centrality and ICT usage have the highest levels of entrepreneurial activity and success effects that grow over time. ICT usage is only correlated with increased entrepreneurial activity when links to powerful men are weak, but these interactive temporal trends do not arise for benefit.

Singh & Maurya (2020) performed a study titled as "Role of Technology and Entrepreneurship in Economic Development: A South Asian Perspective". This study looked at the impact of technological readiness and entrepreneurial activity on the economic growth of four South Asian countries: India, Pakistan, Bhutan, and Nepal. In terms of technical readiness and creativity, India outperforms its neighbours, according to comparative analysis.

RESEARCH GAP

There have been numerous international and national studies on motivational factors that motivate a person to become an entrepreneur, successful entrepreneurship, creativity, drivers, and the effect of technology on entrepreneurs, according to the literature. Comprehensive studies on these issues in the Indian context, especially on the relationship between technology changes and entrepreneurship in Rajasthan, are, however, rare. A theoretical framework for the paper was developed based on an extensive literature review and in-depth expert interviews.

THE THEORETICAL FRAMEWORK

After Independence, the government also supported the entrepreneurship development through policy support. Government supported entrepreneurship development activities like skill development programs, national and international conferences, workshops, technology transfers and technical consultancy services for start-ups and existing entrepreneurs. However, India particularly Rajasthan is found lagging, when its entrepreneurship and innovation indices are compared with that of the leading global countries. Thus, it is essential for the government and allied bodies to boost entrepreneurship development and innovation activities further to improve the above indices for Rajasthan. With this backdrop, the current research study assessed the entrepreneurs' perceptions on the technical driving factors that affect an entrepreneur. Further, it probed the relationship between innovative practices and entrepreneurial success.

The study thus explores the demographic profile of respondents and seeks to find how technology is impacting the entrepreneurship. Literature review revealed that the studies done in the past explained the relationship between technology and entrepreneurship, but the studies on impact of technology on entrepreneurship are very few. After reviewing the literature done in the proposed field the researchers attempted to investigate the impact of technological changes on entrepreneurship.

OBJECTIVES

The present paper attempts to study the impact of technological changes on entrepreneurship and to study the impact of innovation in technology on entrepreneurship.

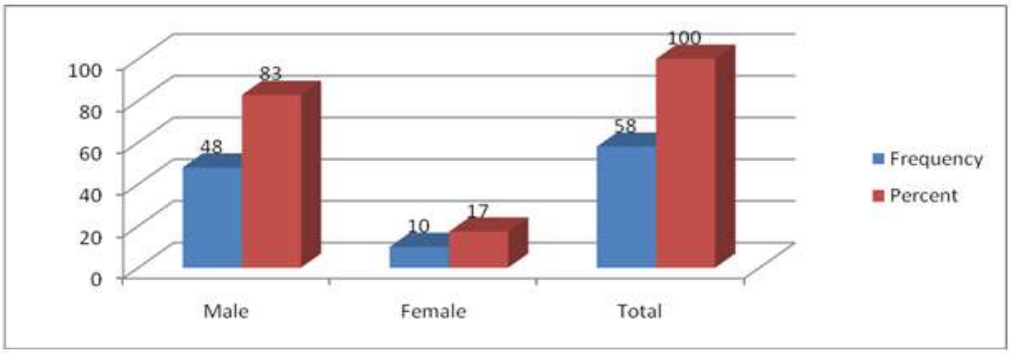
RESEARCH METHODOLOGY

The first part of the article describes the theoretical base of the impact of technological changes on entrepreneurs, thereafter it continues with literature review in order to indicate the effects of technology that is being used for upgrading of the entrepreneurs. Subsequently the data was collected from the entrepreneurs of Rajasthan. The sample size was 60 but only 58 questionnaires were completed for study. Sampling method adopted was a combination of Judgmental and Convenience. The respondents were chosen irrespective of gender, age, income, marital status and education. All the interviewed respondents were from Rajasthan. The questionnaire was formed in order to collect the information to identify the impact of technological changes and innovation on entrepreneurship.

Table 1
FREQUENCY TABLE OF GENDER

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	48	83	83	83
	Female	10	17	30	100
	Total	58	100	112	

Source: Data collected by Authors.



Source: Interpretation of data collected by Authors.

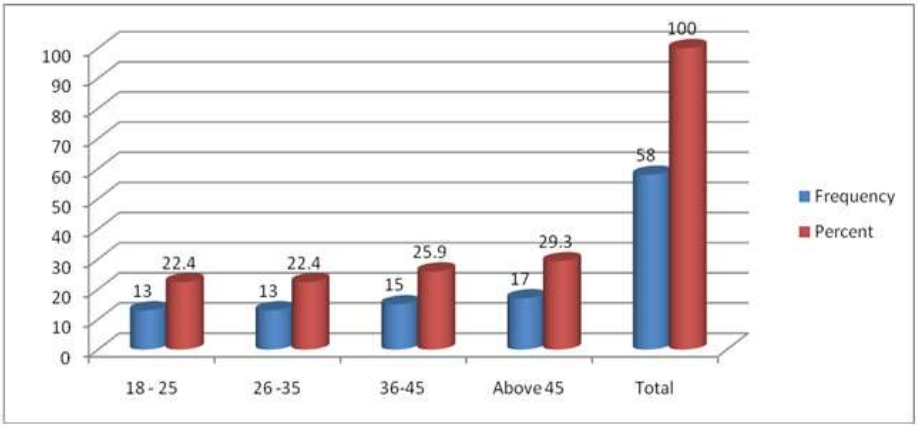
FIGURE 1
FREQUENCY GRAPH OF GENDER

From the above table and Figure No 1, it is inferred that the gender ratio in the sample size is - male frequency = 48 and female frequency = 10 whereas the cumulative percentage of male respondents = 83 and female respondents =17.

Table 2
FREQUENCY TABLE OF AGE

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18 - 25	13	22.4	22.4	22.4
	26 -35	13	22.4	22.4	44.8
	36-45	15	25.9	25.9	70.7
	Above 45	17	29.3	29.3	100.0
	Total	58	100.0	100.0	

Source: Data collected by Authors.



Source: Interpretation of data collected by Authors.

FIGURE 2
FREQUENCY GRAPH OF AGE

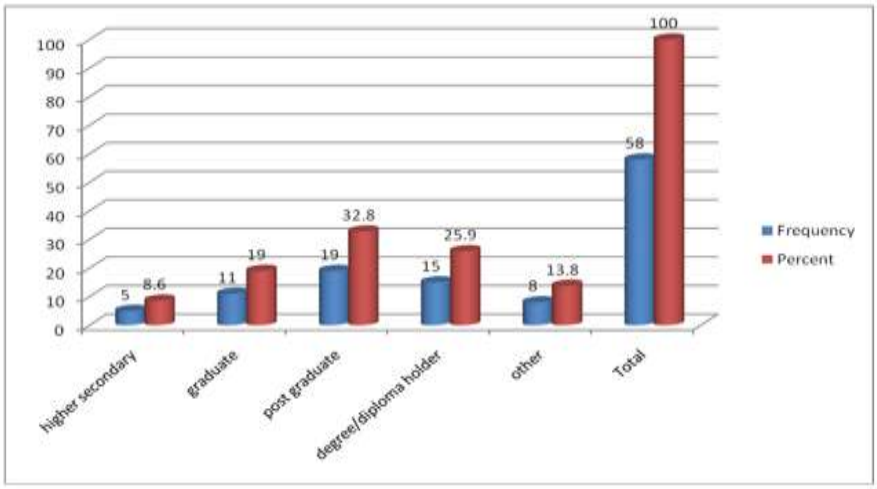
According to the above table and Figure 2, it can be concluded that various dimensions of Age category have been taken to calculate the frequency, and from this it is inferred that age group 18-25 has frequency = 13 and percentage = 22.4, age group 26-35 has frequency = 13 and percentage = 22.4, age group 36-45 has frequency 15 and percentage 25.9 whereas age group above 45 has

frequency = 17 and percentage 29.3, The statistics indicates that the age group above 45 have the highest frequency 29.3 than others.

Table 3
FREQUENCY TABLE OF EDUCATIONAL QUALIFICATION

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Higher Secondary	5	8.6	8.6	8.6
	Graduate	11	19.0	19.0	27.6
	Post Graduate	19	32.8	32.8	60.3
	Degree/Diploma Holder	15	25.9	25.9	86.2
	Other	8	13.8	13.8	100.0
	Total	58	100.0	100.0	

Source: Data collected by Authors.



Source: Interpretation of data collected by Authors.

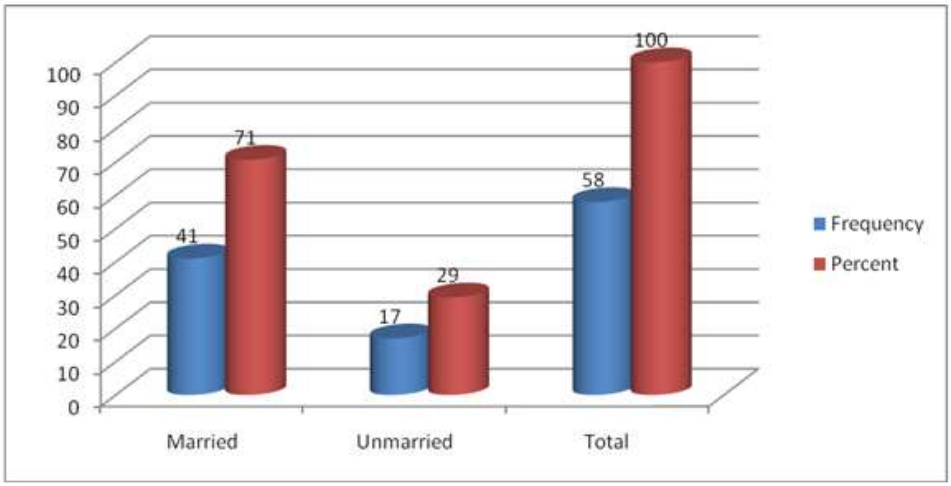
FIGURE 3
FREQUENCY GRAPH OF EDUCATIONAL QUALIFICATION

From the above table and figure 3 of Frequency of Educational Qualification, different parameters of educational qualification have been taken for the calculation of the impact of technology on entrepreneurs. The higher secondary has frequency = 5 and percentage = 8.6, graduate has frequency =11 and percentage = 19, post graduate has frequency = 19 and percentage = 32.8, degree/diploma holder has frequency = 15 and percentage = 25.9, other has frequency = 8 and percentage = 13.8. Form this it is inferred that post graduate respondents has the highest frequency (19) than others.

Table 4
FREQUENCY TABLE OF MARITAL STATUS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Married	41	71	71	71
	Unmarried	17	29	29	100
	Total	58	100	100	

Source: Data collected by Authors.



Source: Interpretation of data collected by Authors.

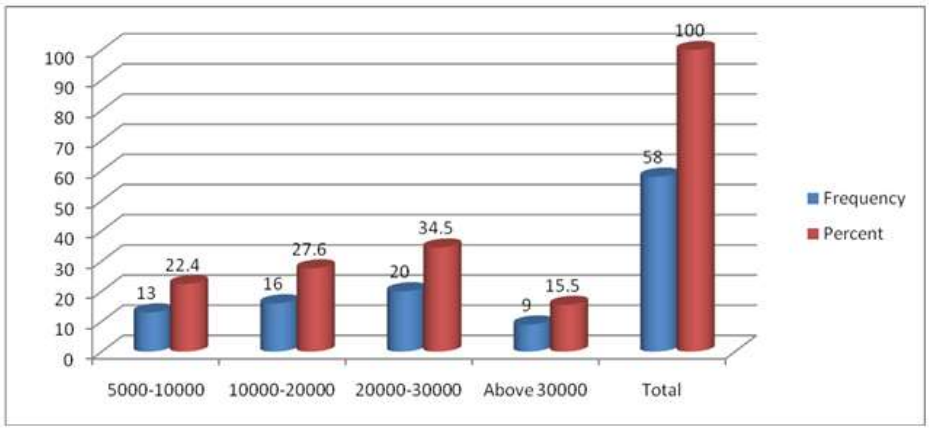
FIGURE 4
FREQUENCY GRAPH OF MARITAL STATUS

According to the above table and graph it can be seen that two categories have been taken in marital status, the married respondent's frequency = 41 and percentage =71 whereas unmarried respondent's frequency = 17 and percentage = 29 thus it is clear that married respondents are more than unmarried respondents.

Table 5
FREQUENCY TABLE OF MONTHLY INCOME

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	5000-10000	13	22.4	22.4	22.4
	10001-20000	16	27.6	27.6	50.0
	20001-30000	20	34.5	34.5	84.5
	Above 30000	9	15.5	15.5	100.0
	Total	58	100.0	100.0	

Source: Data collected by Authors.



Source: Interpretation of data collected by Authors.

FIGURE 5
FREQUENCY GRAPH OF MONTHLY INCOME

According to the above graph and table, it is shown that 22.4% entrepreneurs have INR 5000-10000 income category, 27.6% respondents have 10001-20000 income category, 34.5% have 20001-30000 income category and 15.5% have above 30000 income category, therefore with the frequency calculation it is concluded that income category 20,000-30,000 has the maximum number respondents then others.

Hypothesis

H_{o1}: *There is no significant impact of technological change on entrepreneurship.*

H_{o2}: *There is no significant impact of innovation in technology on entrepreneurship.*

Table 6
CORRELATION TABLE

		Technical changes	Innovation	Entrepreneurship
Technical changes	Pearson Correlation	1	-0.084	0.046
	Sig. (2-tailed)		0.029	0.731
	N	58	58	58
Innovation	Pearson Correlation	-0.084	1	-0.335*
	Sig. (2-tailed)	0.029		0.010
	N	58	58	58
Entrepreneurship	Pearson Correlation	0.046	-0.335*	1
	Sig. (2-tailed)	0.031	0.010	
	N	58	58	58
*. Correlation is significant at the 0.05 level (2-tailed).				

Source: Interpretation of data collected by Authors.

According to the Table 6 the calculation of correlation has been done to the hypothesis and it is inferred that in the section of technical changes the significant value is .029 which is less than p value i.e. .5 and in the section of innovation the significant value is .029 which is again less than p value i.e. .5 and finally in the section of entrepreneurship the significant value is .031 which is less than p value i.e. .5, hence with the help of the analysis it is shown that there is a significant impact of technological changes and innovation on entrepreneurship.

CONCLUSION

Fast technological revolution provides an important opportunity to attain Sustainable Development. Innovative and rising technologies can assist to prevent poverty, abolition of hard work, examine sustainable development, advance food security, encourage energy access and efficiency etc. Each venture in the country is generated out of the term 'Entrepreneurship'. 'Entrepreneurship' is developing out of various discoveries, inventions, innovations, products and processes. Technology development and entrepreneurship provide growth for the nation. Entrepreneurship is a service approach, which can direct to financial independence for people. It creates a venture in which people work as managers rather than being merely a worker. At this point, technology plays a crucial role and helps industry and society to grow and sustain the long term development.

Every technological modernization begins with innovative ventures and creative workers. Originality is a fundamental aspect in raising the Nation's competitive power and economy. In

India, the Government has introduced programs to make Technology Entrepreneurship (TE) ecosystem.

In this article authors studied the correlation between technical changes, innovation and entrepreneurship, and reached the conclusion that there is a significant impact of technological changes and innovation on entrepreneurship. The result thus signifies that technology performs three crucial roles: technology provides innovation in jobs to be done; it increases entrepreneurship power and finally it helps in achieving economic growth. Therefore, it is suggested that entrepreneurs must create a conductive environment with the help of technology. This will enhance the customer satisfaction as well as economy of the country.

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