
A Study of Innovative Attitude of Indian Entrepreneurs of Various Industries in the Context to Educational and Economic Background

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Abstract

The latest lifestyle or recent trends are the result of innovative efforts undertaken by entrepreneurs. It is the thirst of entrepreneurs that gives birth to a new product. To survive in economy innovations are essentials. Many entrepreneurs do not innovate but imitate and even though they earn handsome. Innovative attitudes may not be the property carrying by every entrepreneur. Not only but it might be the result of a multifold factors. So a research is conducted in Saurashtra region of Gujarat state. A sample of 209 entrepreneurs of various 7 prominent industries of Saurashtra have been selected and compared on the grounds of innovation. The study compares innovative attitude of entrepreneurs based on their educational qualifications and economic background. The results revealed that no significant difference is noticed among the various entrepreneurs of various industries based on innovation. They differed significantly while compared on the grounds of educational qualifications and economic backgrounds.

Key Words

Innovation, Entrepreneurship, Gujarat, Attributes, Educational qualifications, Economic background.

Introduction

Entrepreneurs can change the world. The latest lifestyle or recent trends are the result of innovative efforts undertaken by entrepreneurs. An innovation is a change in market or society. It produces a greater yield for the user, greater wealth-producing capacity for society, higher value or greater satisfaction¹. Any invention is first born in the minds of entrepreneurs. The society gets the benefits at a lateral stage. The journey of converting a seed of thought into a utilitarian product in the hands of the end users is as painful as delivering a baby. Entrepreneur truly plays role of a parent who holds the finger of a new child-the product, right from the conception till it becomes mature in the market. One of the major reasons of survival of any economy is entrepreneurial thirst to invent something new. This will increase the strength of the firm in competition. On observing minutely it can be noticed that many entrepreneurs are not ready to innovate but eager to imitate. They follow the trend setters and even though earn handsome. Crossan and Apaydin (2010) point out in their recent review of organizational innovation that only a small percentage of articles have been written on the individual or team level². This has motivated the researcher to undertake a research on innovative attitude of contemporary entrepreneurs. The research is undertaken in Saurashtra region of Gujarat state. More than 200 entrepreneurs of 7 prominent industries of Saurashtra have been selected. The entrepreneurs are compared on the grounds of innovative attitude. Interesting results are found.

Review of Literature

A research undertaken by Darren Lee Ross and Benjamin Mitchell in year 2007 on *Doing Business in Torres Traits: A Study of the Relationship between Culture and the Nature of the Indigenous Entrepreneur*³. The study focuses on the relationship between culture and entrepreneurship in the Torres Strait Islands. Similar to other countries with a low per capita Gross Domestic Product (GDP), aggregate evidence suggests that entrepreneurial activity is commonplace among the indigenous community.

A Paper Presented in IPAA 2009 International Public Affairs Conference by David B. Audretsch and Nancy S. Meyer on *Religion, Culture and Entrepreneurship in India*⁴. The research in India analyzes the effects of religion and culture on an individual's choice to engage in entrepreneurial activities. Hinduism and its lingering caste system seems to engender a focus on casual labor for individuals under its religious influence, while Muslim and Christian populations are more likely to start their own small enterprises. These findings indicate the need for innovative social programs and policies to mitigate the effects of religious perceptions in order to foster entrepreneur-led economic growth.

A research conducted by Martin Andersson and Borje Johansson in June 2008 on *Innovation Ideas and Regional Characteristics: Product Innovations and Export Entrepreneurship by Firms in Swedish Regions*⁵. This paper focuses upon the ways in which characteristics of regions in regards to knowledge sources, communication opportunities, and absorptive capacity influence the development of innovation ideas among existing and potential entrepreneurs.

An article published in the Journal of International Entrepreneurship in October 2008 on *Entrepreneurial characteristics in Switzerland and the UK: A comparative study of techno-entrepreneurs*⁶, the researchers were KayhanTajeddini&Stephen L. Mueller. For this study, a comparative analysis of high-tech entrepreneurs in Switzerland and the UK was undertaken to determine the extent to which they differ in terms of entrepreneurial characteristics. Findings reveal that some entrepreneurial characteristics such as autonomy, propensity for risk, and locus of control are higher among UK techno-entrepreneurs while other characteristics such as achievement need, tolerance for ambiguity, innovativeness, and confidence are higher among Swiss techno-entrepreneurs.

Objectives

The objectives of the research can be stated as follows:

- 1) To study the Innovative attitudes of entrepreneurs belong to various industries.
- 2) To study the relationship Innovative attitudes of entrepreneurs and their educational qualifications.
- 3) To study the relationship between Innovative attitudes of entrepreneurs and their economic background.

Hypothesis

Based on the objectives the hypothesis can be stated as follows:

- 1) There is no significant difference in the attribute innovation of entrepreneurs of the various industries.
- 2) There is no significant difference in the attribute innovation of entrepreneurs of various educational qualifications.
- 3) There is no significant difference in the attribute innovation of entrepreneurs of various economic background.

Sample Size

For the purpose of study a sample of more than 200 entrepreneurs is selected from total 7 industries. The method of selection was simple random sampling. The industries and sample size were Brass Industry– 29, Cotton Industry– 37, Ceramic Industry – 42, Casting Industry – 28, Imitation Jewellers Industry- 37, Bearing Industry– 17 and Engine Industry– 19.

Tools and Techniques

Questionnaire was prepared to collect the data. For the purpose of analysis ANOVA technique was applied at 5% level of significance.

Innovative Attitude of Entrepreneurs

As per the title, it is a descriptive study of entrepreneurs' attribute. The identity of an entrepreneur is a bundle of attributes what makes him different from the other factors of production. From the literature review it has been noticed that various researches have taken place regarding attributes of entrepreneurs which includes commonly certain attributes like Ambitious, Tolerance of Ambiguity, Bearing risk and uncertainty, Stick ability etc., which are normally found almost in every entrepreneur irrespective of the type of their industry. So the researcher has decided to conduct a research on the attribute Innovation on which the research is not done in Saurashtra region of Gujarat state.

Innovation is the ability to think independently and creatively. Innovation is defined as adding something new to an existing product or process. All innovation begins with creative ideas. Innovation is the implantation of creative inspiration⁷. It is a quality of being new and different in a good and appealing way. Possessing Innovative attribute is a rare virtue. All may not possess it. There are many businessmen who just imitate and don't create but innovation is something being first in any area. Sometimes it is also seen that entrepreneurs prefer to be original. They want to take initiative in any particular area even though it's costlier.

Type of Study

This study focuses on an attribute Innovation of entrepreneurs. The major purpose of the research is description of the state of affairs as it exists at present⁸. So, this study will be of a Descriptive – Analytical type.

Scope - Limitations

The data collection was made in the Saurashtra region of Gujarat state. So the conclusions are applicable in that region only. The research is focusing only on the attribute Innovation. Any other side of entrepreneurship is not considered.

Data analysis

1) Innovative attitude and various industries

To study the relationship between entrepreneurs of various industries and innovation the data analysis can be undertaken as follows.

H₀: There is no significant difference in the attribute innovation of entrepreneurs of the various industries.

Table No. 1
Table showing Descriptive Analysis of Means of Attribute ‘Innovation’ Industry-wise

Innovation Industry	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
					Brass	29		
Cotton	37	10.2162	2.47358	.40665	9.3915	11.0410	6.00	16.00
Ceramic	42	9.5952	2.35879	.36397	8.8602	10.3303	5.00	15.00
Casting	28	10.5714	3.08435	.58289	9.3754	11.7674	4.00	17.00
Imitation Jewellers	37	10.5405	2.37574	.39057	9.7484	11.3327	4.00	15.00
Bearing	17	9.7059	2.49411	.60491	8.4235	10.9882	5.00	16.00
Engine	19	9.1579	3.53181	.81025	7.4556	10.8602	2.00	15.00
Total	209	10.1292	2.67603	.18510	9.7643	10.4941	2.00	18.00

If one looks at the descriptive chart it is found that in context the attribute ‘Innovation’, the highest mean value (10.7241) is found in Brass industry. Means the entrepreneurs of Brass industry are the most Innovative. While the least mean value is found in Engine. Means entrepreneurs of Engine industry are least Innovative among these 7. If it is compared every industry mean with the aggregate, one can notice that 3 industries’ mean value is below the average and 4 industries show above average. The highest range 13 is found in Brass industry, Casting and Engine Industry. The least value of standard deviation is 0.36397 with the Ceramic industry.

Graph No. 1
Mean Values

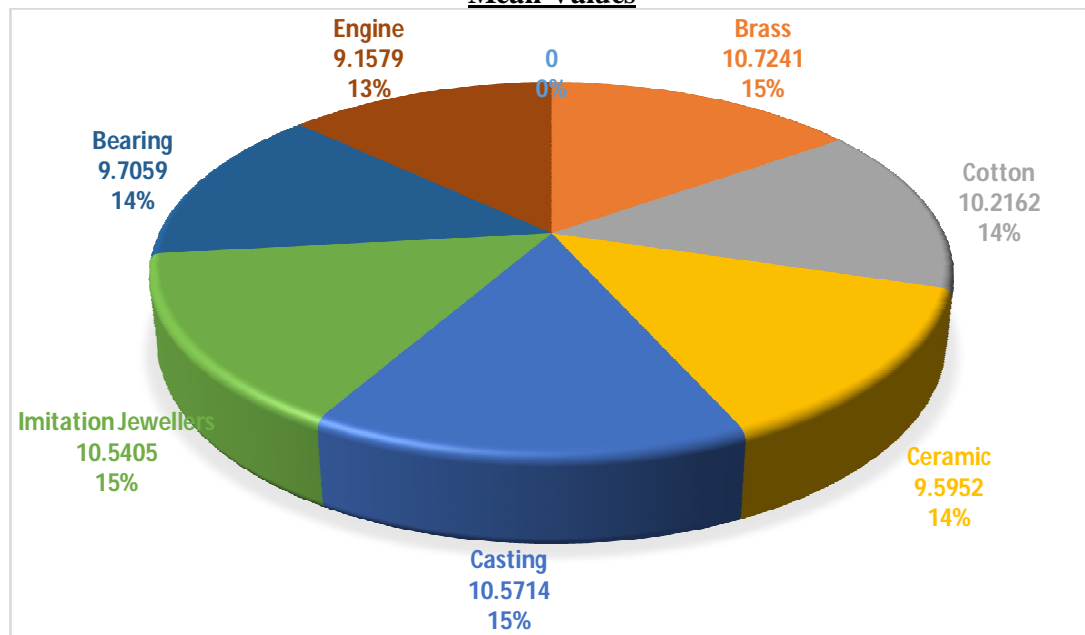


Table No. 2

A Table showing One Way Analysis of Variances (ANOVA)

	Sum of Squares	Degree of Freedom	Mean Square	F	Sig.
Between Groups	55.227	6	9.205	1.296	.260
Within Groups	1434.284	202	7.100		
Total	1489.512	208			

On studying the ANOVA chart it can be observed that the F value is 1.296 which are comparatively less significant at the 5 percent level of significance and it says that there is no significant difference in the attribute 'Innovation' of entrepreneurs of various industries. So the null hypothesis is accepted and the alternative hypothesis is rejected.

2) Innovation and Educational qualifications

To study the relationship between Innovative attitudes of entrepreneurs in context to their educational qualifications, the analysis can be undertaken as follows.

H₀: There is no significant difference in the attribute innovation of entrepreneurs of various educational qualifications.

Table No. 3

Table showing Descriptive Analysis of Means of Attribute 'Innovation' Educational Qualification-wise

Educational Qualifications	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
SSC	56	10.3750	2.39365	.31986	9.7340	11.0160	4.00	17.00
HSC	55	10.1273	2.96307	.39954	9.3262	10.9283	2.00	18.00
Graduate	58	10.1897	2.55093	.33495	9.5189	10.8604	5.00	16.00
Post Graduate	20	8.5000	3.12039	.69774	7.0396	9.9604	4.00	15.00
Diploma	7	10.4286	2.99205	1.13089	7.6614	13.1958	5.00	15.00
Uneducated	12	11.4167	.90034	.25990	10.8446	11.9887	10.00	13.00
Total	208	10.1394	2.67838	.18571	9.7733	10.5056	2.00	18.00

In the above descriptive chart the first column is for the various educational qualifications of entrepreneurs. From the above information one can study that there is not even a single entrepreneur has done the doctorate, while least no is with diploma holders and 12 are uneducated. On studying the mean column one can observe that the highest value of entrepreneurial attribute 'Innovation' is from uneducated class and the lowest is from the highest educated post graduated entrepreneurs. The overall average of means is 10.1394. Out of all six classes of education, 2 are less than the overall average of entrepreneurial attribute value and the remaining 4 are more than average. One notable conclusion can be derived is that there negative relationship between entrepreneurial **Innovation** and educational qualifications. Up to graduation level there is no significant difference but at PG level it differs significantly and slopes negatively on the other hand the highest value of entrepreneurial **Innovation** is found in the group of HSC passed entrepreneurs. If we study the range, it is found the lowest among uneducated entrepreneurs 3 (13-10) and so as with its standard deviation. On the contrary the highest range 16(18-2) is found in the HSC passed entrepreneurs and highest standard deviation is with post graduate entrepreneurs.

Graph No. 2
Mean Value s

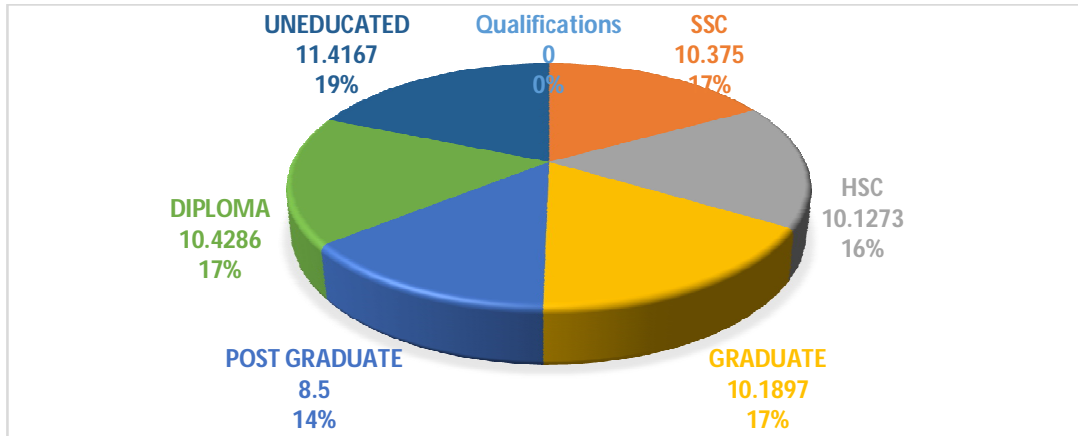


Table No. 4
A Table showing One Way Analysis of Variances
ANOVA- Innovation and Qualifications

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	77.178	5	15.436	2.215	.054
Within Groups	1407.779	202	6.969		
Total	1484.957	207			

On studying the ANOVA chart it can be observed that the F value is 2.215 which are the highly significant at the 5 percent level of significance and it says that there is significant difference in the attribute ‘**Innovation**’ of entrepreneurs of various industries having various educational qualifications.

Table No. 5
A Table Showing Post Hoc Analysis – Tukey HSD Innovation and Qualifications

Multiple Comparisons						
Dependent Variable: InnovationTukeyHSD						
(I) Qualification	(J) Qualification	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
SSC	2.00	.24773	.50116	.996	-1.1943	1.6897
	3.00	.18534	.49458	.999	-1.2377	1.6084
	4.00	1.87500	.68768	.074	-.1037	3.8537
	6.00	-.05357	1.05832	1.000	-3.0987	2.9915
	7.00	-1.04167	.83977	.816	-3.4579	1.3746
HSC	1.00	-.24773	.50116	.996	-1.6897	1.1943
	3.00	-.06238	.49686	1.000	-1.4920	1.3672
	4.00	1.62727	.68933	.175	-.3561	3.6107
	6.00	-.30130	1.05939	1.000	-3.3495	2.7469
	7.00	-1.28939	.84112	.643	-3.7095	1.1307

Graduate	1.00	-.18534	.49458	.999	-1.6084	1.2377
	2.00	.06238	.49686	1.000	-1.3672	1.4920
	4.00	1.68966	.68456	.139	-.2800	3.6593
	6.00	-.23892	1.05629	1.000	-3.2782	2.8003
	7.00	-1.22701	.83721	.687	-3.6359	1.1819
Post Graduate	1.00	-1.87500	.68768	.074	-3.8537	.1037
	2.00	-1.62727	.68933	.175	-3.6107	.3561
	3.00	-1.68966	.68456	.139	-3.6593	.2800
	6.00	-1.92857	1.15934	.558	-5.2643	1.4072
	7.00	-2.91667	.96396	.033	-5.6903	-1.1431
Diploma	1.00	.05357	1.05832	1.000	-2.9915	3.0987
	2.00	.30130	1.05939	1.000	-2.7469	3.3495
	3.00	.23892	1.05629	1.000	-2.8003	3.2782
	4.00	1.92857	1.15934	.558	-1.4072	5.2643
	7.00	-.98810	1.25553	.969	-4.6006	2.6244
Uneducated	1.00	1.04167	.83977	.816	-1.3746	3.4579
	2.00	1.28939	.84112	.643	-1.1307	3.7095
	3.00	1.22701	.83721	.687	-1.1819	3.6359
	4.00	2.91667	.96396	.033	.1431	5.6903
	6.00	.98810	1.25553	.969	-2.6244	4.6006

*. The mean difference is significant at the 0.05 level.

In the multiple comparisons we compare the means among various levels of qualifications. Firstly if we compare SSC passed entrepreneurs' attribute '**Innovation**' with the others, we can observe that there is no significant difference with the entrepreneurs who are HSC passed. Similar results can be seen with Graduate, Post Graduate, Diploma holders and uneducated entrepreneurs. Similarly the chart gives similar conclusions on comparing HSC passed entrepreneurial attribute '**Innovation**' with the others that there is no significant difference in the levels of **Innovative attitude**. Just like that with graduate entrepreneurs. But on comparing **Innovative attitude** of post graduate entrepreneurs with the others it differs significantly with the uneducated entrepreneurs. The **Innovation** level is found more among uneducated entrepreneurs. The reverse trend we find on comparing uneducated entrepreneurs with the postgraduate entrepreneurs. Here we found that postgraduate entrepreneurs are found less **Innovative**. So we can conclude that there is negative relationship between qualification and **Innovation**. The null hypothesis is rejected and the alternative hypothesis is accepted.

3) Innovation and Economic background

To study the relationship between Innovative attitudes of entrepreneurs in context to their economic background, the analysis can be undertaken as follows.

H₀: There is no significant difference in the attribute innovation of entrepreneurs of various economic backgrounds.

Table No. 6
Table showing Descriptive Analysis of Means of Attribute 'Innovation'
Economic Class-Wise

Economic Condition	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
					Lower Middle class	4		
Middle class	70	10.2571	2.60816	.31173	9.6352	10.8790	4.00	17.00
Higher Middle class	76	10.3816	2.94830	.33819	9.7079	11.0553	2.00	18.00
Rich Class	59	9.4407	2.22270	.28937	8.8614	10.0199	4.00	14.00
Total	209	10.1292	2.67603	.18510	9.7643	10.4941	2.00	18.00

In the above descriptive chart the first column is for the various economic conditions of the family. From the above chart one can observe that none of the entrepreneur is from Poor class. The highest entrepreneurs are from the Higher Middle class. The highest value of mean for the attribute 'Innovation' is found in the Lower middle class entrepreneurs and the lowest is from Rich class. A negative trend is observed here. The overall average mean is 10.1292. Out of four classes, only rich class is having less than the average attribute while the other three classes are having more than the average value. If we study the range, it is found the lowest among lower middle class and highest is highest is with the higher middle class entrepreneurs. Lowest value of standard deviation is with the lower middle class entrepreneurs and the highest is with the Higher middle class entrepreneurs.

Graph No. 3
Mean Values

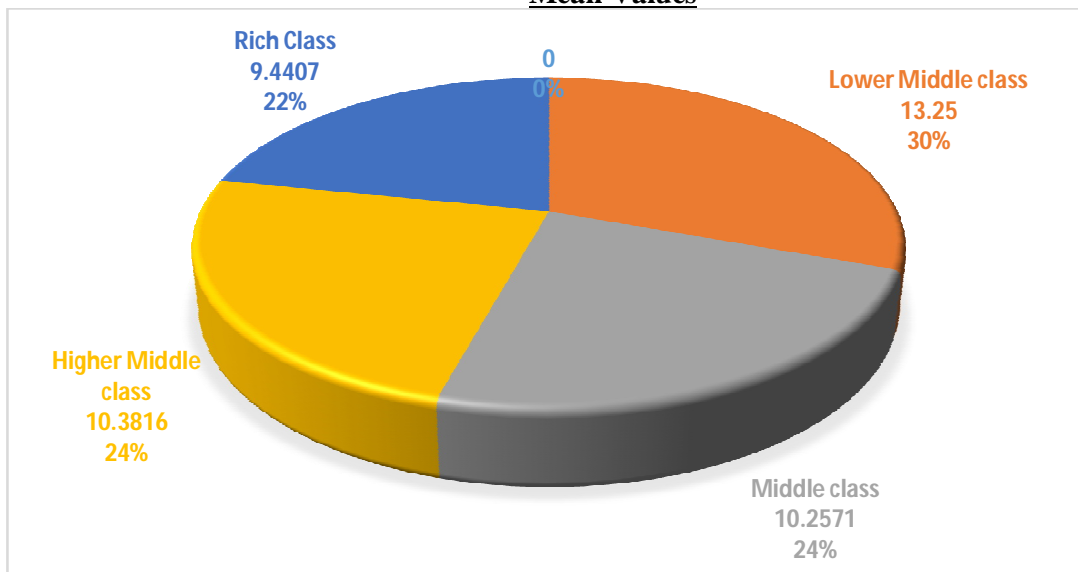


Table No. 7

**A Table showing One Way Analysis of Variances
ANOVA-Economic Class and Innovation**

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	72.914	3	24.305	3.517	.016
Within Groups	1416.598	205	6.910		
Total	1489.512	208			

On studying the ANOVA chart it can be observed that the F value is 3.517 which are the highly significant at the 5 percent level of significance and it says that there is significant difference in the attribute 'Innovation' of entrepreneurs of various industries having various Economic background.

Table No. 8

A Table Showing Post Hoc Analysis – Tukey HSD Economic Class and Innovation

Multiple Comparisons						
Dependent Variable: Innovation				Tukey HSD		
(I) Economic Condition	(J) Economic Condition	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Lower Middle Class	3.00	2.99286	1.35140	.123	-.5076	6.4933
	4.00	2.86842	1.34851	.148	-.6245	6.3614
	5.00	3.80932	1.35819	.028	.2913	7.3273
Middle Class	2.00	-2.99286	1.35140	.123	-6.4933	.5076
	4.00	-.12444	.43548	.992	-1.2524	1.0036
	5.00	.81646	.46459	.297	-.3869	2.0198
Higher Middle Class	2.00	-2.86842	1.34851	.148	-6.3614	.6245
	3.00	.12444	.43548	.992	-1.0036	1.2524
	5.00	.94090	.45612	.169	-.2406	2.1224
Rich Class	2.00	-3.80932	1.35819	.028	-7.3273	-.2913
	3.00	-.81646	.46459	.297	-2.0198	.3869
	4.00	-.94090	.45612	.169	-2.1224	.2406

*. The mean difference is significant at the 0.05 level.

In the multiple comparisons we compare the means of attributes of entrepreneurs among various economic backgrounds. Firstly if we compare Lower Middle class entrepreneurs' attribute 'Innovation' with the others, we can observe that there is no significant difference is noticed with Middle class as well as Higher middle class entrepreneurs' attribute but it differs significantly on comparing with the Rich class entrepreneurs. It is significantly high. On comparing middle class entrepreneurs with every other class, no significant difference is noticed. Similarly it does not differ significantly on comparing Higher middle class entrepreneurs with every other class. But there is a significant difference on comparing Rich class entrepreneurs' attribute 'Innovation' with the lower middle class entrepreneurs. It is significantly low. The null hypothesis is rejected and the alternative hypothesis is accepted.

Conclusions and Findings

In context to various industries, no significant difference is noticed. Every industry entrepreneurs are almost equally innovative. On the basis of their educational qualifications, they differ significantly. If they are broadly divided then least educated (Up to SSC or HSC passed) and highly educated (At

least graduate and post graduate) they differ significantly. Least educated showed significantly more innovative attribute as compared to highly educated entrepreneurs. A negative relationship is observed between educational qualifications and innovation. It suggests to develop such an educational system that can develop innovative attitude among the entrepreneurs as highly educated are least innovative. The sample is from four economic classes of the society from lower middle class to rich class. Lower middle class entrepreneurs were significantly more innovative than rich class entrepreneurs. It suggests that inventions are born in adverse economic conditions.

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