

AWARENESS AND USAGE PATTERNS OF IPR IN THE INDIAN INDUSTRY A COMPREHENSIVE ANALYSIS

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Abstract

Intellectual property rights (IPRs) are the new age wealth of economies in the capitalist markets. IPRs create wealth in the form of appreciable value of patents, copyrights, and trademarks. IPRs are appreciable assets in an economy. The salient features of IPR are non maintenance value and assets creating value both in short run and long run. In the short run the revenues are in the form of royalties and in long run in the form of capital value appreciation of a patent or copy right and trade mark.

Keywords: *Intellectual property rights (IPR), patents, copyrights, and trademarks*

Introduction

The level of awareness of IPR on creation, maintenance and usage for the development of business and revenue is not familiar among the industry and the society at large. India is an open knowledge base and think tank. But creation and usage of those are for the benefit of the economy and society by creating commercial value and to sell to the product developers. The gaps existing in doing the same is analyzed in this paper.

Descriptive Analysis of Sample

Percentage analysis is one of the statistical measures used to describe the characteristics of the sample or population in totality. Percentage analysis involves computing measures of variables selected of the study and its finding will give easy interpretation for the reader. Descriptive analysis covers the demographic data of the sample respondents and the independent variables that are used in this study. Frequency distribution of Gender, Age groups; Department, Educational Stream, Working Sector, Exposure towards IPR Environment, Source of Knowledge for IPR Information, level of Knowledge on IPRs and its implications to development, when the sample respondents came to know about IPRs and its importance and No of Years Experience in IPR Field are discussed along with bar diagram representation.

Table 1: Frequency Distribution of Sample based on the Gender

Gender	Frequency	Percentage
Male	286	61.5
Female	179	38.5
Total	465	100

From the above table, 61.5% of the sample belongs to Male and 38.5% of sample belongs to Female. Compare to females, males are higher in representation. It is understood that males are in more in the IP related work environment.

Table 2: Frequency distribution of age group among the sample

Age Group in years	Frequency	Percentage
Below 30	228	49.0
31-40	101	21.7
41-50	82	17.6
Above 50	54	11.6
Total	465	100.0

From the above table, it is observed from the table that 228 sample respondents of below 30 years; 101 sample respondents in the range of 31 to 40 years; 82 in the group of 41 to 50 years and 54 sample respondents above 50 years have participated in this study. It is observed from the table that lot of participation are from the current working generation.

Table 3: Frequency distribution of Education Stream among the sample

Education stream	Frequency	Percentage
Arts	53	11.4
Science	117	25.2
Engineering	178	38.3
Management	84	18.1
Medical	33	7.1
Total	465	100

The Table 3 shows the frequency distribution of education stream among the samples. 53 sample respondents from arts stream representing 11.4% of the total sample; 117 sample respondents from science background representing 25.2% of the total sample; 178 sample respondents from engineering stream representing 38.3% of the total sample; 84 sample respondents from management stream representing 18.1% of the total sample; 33 sample respondents from Medical stream representing 7.1% of the total sample have participated in this study. Majority of the respondents were from Engineering and Science stream.

Table 4: Frequency distribution of Working Sector among the sample

Working Sector	Frequency	Percentage
Pharma	30	6.5
Industrial designs	107	23.0
Bulk Chemicals	51	11.0
R&D	136	29.2
Agri-tech	6	1.3
Print & Electronic Media	22	4.7
Education	90	19.4
Traditional Medical Therapy	23	4.9
Total	465	100

Form the above Table 4, it is observed from the table that 30 sample respondents from Pharma sector contributing 6.5%; 107 sample respondents from industrial designs contributing 23%; 51 from Bulk chemicals contributing to 11%; 136 from R&D contributing 29.2%; 6 from Agritech contributing 1.3%; 22 from printing & electronic media contributing 4.7%; 90 from Education contributing 19.4%; 23 from Traditional Medical Therapy contributing 4.9% for this study. Major contributing sectors are R&D; Industrial designs and Education whereas Agritech has contributed the lowest percentage.

Table 5: Frequency distribution of exposure towards IPR environment among the sample

Exposure	Frequency	Percentage
Yes	217	46.7
No	248	53.3
Total	465	100

From table 5, it is noted that 53.3% of the respondents don't have the exposure to IPR environment while the remaining 46.7% have responded positively.

Table 6: Frequency distribution of exposure towards IPR environment among the sample

Source	Frequency	Percentage
Friends	173	37.2
Relatives	24	5.2
News Paper	62	13.3
Magazine	27	5.8

News Letter	12	2.6
Handouts	9	1.9
Television	6	1.3
Exhibition	6	1.3
Academics	58	12.5
Internet-(Web)	88	18.9
Total	465	100

It is inferred from table 6, that the major source of knowledge is the word of mouth by friends giving 37.2% from the total sample. Next stands the power of internet sharing 18.9% followed by newspaper 13.3% and then academics at 12.5%. 24 persons have responded as relatives and thus contributing to 5.2%; 27 persons have responded as magazines and thus contributing to 5.8%; 12 persons have responded as news letter and thus contributing to 2.6%; 9 persons have responded as handouts and thus contributing to 1.9% and 6 persons have responded as television and exhibition thus contributing to 1.3% for the frequency distribution of source of knowledge among the samples.

Table:7 Frequency distribution of level of knowledge on IPRs and the implications to development among the sample

Level	Frequency	Percentage
Poor	35	7.5
Average	86	18.5
Good	127	27.3
V.Good	154	33.1
Excellent	63	13.5
Total	465	100

This table shows that 32.5% of the samples have very good level of knowledge on IPRs and implications to development among the total sample. 105 samples have responded good and 104 samples have responded average contributing 22.4% and 22.6% respectively. Interestingly 14.2% have responded excellent whereas 8.4% has poor.

Table: 8 Frequency distribution of know about IPRs and its importance among the sample

Level	Frequency	Percentage
College Level	170	36.6
University Level	21	4.5
Research Level	62	13.3
Career entry level	175	37.6

Senior employment level	37	8.0
Total	465	100

37.6% of the sample respondents have known IPRs and its importance at career entry level; 36.6% in their college level; 13.3% at their research level and 4.5% at their university level. Surprisingly 8% have responded that they have known IPRs and its importance only at senior employment level.

Table: 9 Frequency distribution of sample on the basis of experience

Experience	Frequency	Percentage
Below 5	214	46
5-10	130	28
10-15	54	11.6
Above 15	67	14.4
Total	465	100

The data in table- 9, shows that the majority of the respondents are in the budding stage of their years of experience as 214 persons i.e. 46% have responded less than 5 years which is the lowest data point in this category; 130 persons i.e 28% in 5-10 years category; 54 sample respondents i.e 11.6% in 10-15 years category and 67 sample respondents i.e 14.4% in above 15 years category.

Regression Analysis of Importance of IPR on the Dimensions of IPR

In this study, the dependent variable is Importance of IPR, Independent variables are number of years of experience in IPR field, Education stream, Department, Age Group in years, Gender, Problems with regard to IPR, Level of knowledge on IPRs and its implications to development, and Knowledge on IPR used in the industry(a) and analysis are discussed as follows:

- Dependent variable : Importance of IPR (Y)
- Independent variables : 1. Number of years experience in IPR field(X_1)
 2. Education stream (X_2)
 3. Department (X_3)
 4. Age Group in years (X_4)
 5. Gender (X_5)
 6. Problems with regard to IPR (X_6)
 7. Level of knowledge on IPRs and its implications to development (X_7)
 8. Knowledge on IPR used in the industry(a) (X_8)
- Multiple R value : 0.684

R Square value : 0.468
 F value : 50.115
 P value : 0.000**

Table 10: Variables in the Multiple Regression Analysis

Variables	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	18.862	1.958		9.635	0.000
Number of years of experience in IPR field(X ₁)	0.08	0.021	0.166	3.783	0.000
Education stream (X ₂)	0.222	0.023	0.392	9.535	0.000
Department (X ₃)	2.014	0.507	0.144	3.972	0.000
Age Group in years (X ₄)	-1.299	0.234	-0.202	-5.552	0.000
Gender (X ₅)	0.326	0.221	0.051	1.474	0.141
Problems with regard to IPR (X ₆)	-0.27	0.257	-0.037	-1.05	0.294
Level of knowledge on IPRs and its implications to development (X ₇)	0.734	0.212	0.128	3.456	0.001
Knowledge on IPR used in the industry(a) (X ₈)	-0.221	0.238	-0.035	-0.931	0.352

a Dependent Variable: Importance of IPR

The multiple correlation coefficient is 0.684 measures the degree of relationship between the actual values and the predicted values of the importance of IPR. Because the predicted values are obtained as a linear combination of No of years experience in IPR field, Education stream, Department, Age Group in years, Gender, Problems with regard to IPR, Level of knowledge on IPRs and its implications to development, and Knowledge on IPR used in the industry (a), the coefficient value of 0.684 indicates that the relationship between importance of IPR and the independent variables is quite strong and positive.

The Coefficient of Determination R-square measures the goodness-of-fit of the estimated Sample Regression Plane (SRP) in terms of the proportion of the variation in the dependent variables explained by the fitted sample regression equation. Thus, the value of R square is 0.468 simply means that about 46.8% of the variation in importance of IPR is explained by the estimated SRP that uses X1 to X8 as the independent variables and R square value is significant at 1 % level.

The multiple regression equation is

$$Y = 18.862 + 0.080X_1 + 0.222X_2 + 2.014X_3 + -1.299X_4 + -0.326X_5 + -0.270X_6 + 0.734X_7 + -0.221X_8$$

Here the coefficient of X_1 is 0.080 represents every unit increase in No of years experience in IPR field score and this coefficient value is significant at 1% level. The coefficient of X_2 is 0.222 represents every unit increase in Education stream and this coefficient value is significant at 1% level. The coefficient of X_3 is 2.014 represents importance of IPR score would increase by 2.014 for every unit increase in Department and this coefficient value is significant at 1% level. The coefficient of X_4 is -1.299 represents importance of IPR score would decrease by 1.299 for every unit increase in Age Group in years and this coefficient value is significant at 1% level. The coefficient of X_5 is -0.326 represents importance of IPR score would decrease by 0.326 for every unit increase in Gender and this coefficient value is not significant at 5% level. The coefficient of X_6 is -0.270 represents every unit increase in Problems with regard to IPR and this coefficient value is not significant at 5% level. The coefficient of X_7 is 0.734 represents every unit increase in Level of knowledge on IPRs and its implications to development and this coefficient value is not significant at 5% level. The coefficient of X_8 is -0.221 represents every unit increase in Knowledge on IPR used in the industry and this coefficient value is not significant at 5% level.

Summary and Conclusion

Based on the comprehensive analysis of various factors responsible for the low level of awareness and usage patterns of intellectual property rights and its implications to the business is observed. The primary factors responsible for the same are educational stream, gender and the usage level and practical applications in the business. The development of awareness among the youth is possible through introducing the courses on intellectual property rights and its implications to the business from undergraduate level in the education. In addition, set up of IPR incubation and information and assistance cell at industrial corridors and clusters and review of the functioning of the cells from time to time can enhance the usage in the industry. The regulation on IPR needs to be promoted in a stringent way in all the fields for boosting the IPR asset value and creation of the wealth in the form of intellectual and appreciable assets. This can boost the economy to the greater heights and helps the society to ripe the benefits of IPR.

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