

**INTELLECTUAL PROPERTY POLICY: A TOOL FOR HARMONIZING
ENTREPRENEURSHIP AND INNOVATIONS IN TERTIARY INSTITUTIONS USING CHI-
SQUARE.**

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Abstract

This research is aimed at recognizing intellectual property (IP) policy as the key driver to harmonizing entrepreneurship and innovations in our tertiary institutions and ensuring compliance with applicable laws to ensure that tertiary institutions are knowledgeable about the Intellectual Property policy and Intellectual Property (IP) systems that exist in Nigeria. This will in turn provide information on Intellectual Property rights and make it available to entrepreneurial innovations through entrepreneurship. The methodology of this research was an in depth interview and questionnaire on a population size of 386 respondents using simple random sampling to select valid data from the various Colleges of Igbinedion University Okada. The data was analyzed using chi-square test. 235 (60.9%) of the respondent were of the opinion that intellectual property policy should be enforced to ensure that products from entrepreneurial practices in tertiary institutions should be readily available to the end users using an efficient technological process of transfer and 151(39.1%) of the respondents ,declined. 309(80%) of the respondents were of the opinion that intellectual property policy will help to ensure compliance with applicable laws and also build and assist all entrepreneurial projects in the tertiary institution while 77 (19.9%) declined. 368 (95.3%) respondents were of the opinion that intellectual property policy will help in ensuring that tertiary institutions are knowledgeable about the intellectual property system that exist and how to acquire the intellectual property rights to entrepreneurial innovations through entrepreneurship while 18 (4.6%)declined. In conclusion, It has been established that Intellectual property policy is a tool for harmonizing entrepreneurship and innovations in tertiary institutions.

Keywords: Intellectual property policy (IPP), Entrepreneurship, Innovations, Intellectual property rights (IPR), Chi-square

1.0 INTRODUCTION

In order to eradicate intellectual theft in the academia, there is need to harmonize entrepreneurship and innovations by ensuring compliance with applicable law, using intellectual property policy. Intellectual property policy is a plan of action, detailedly spelt out by a tertiary institution for the effective and efficient management of the tertiary institutions painstakingly selected intellectual property assets. This policy is derived from the tertiary institution's entrepreneurial activities[1].Commercialized entrepreneurial activities bring about very sensitive issues such as: right to product ownership, trade secrets, income generation called Internally Generated Revenue(IGR) and protecting of generated intellectual property using the intellectual property policy of the tertiary institution. These entrepreneurial activities help in generating optimized positive outcomes of assets derived from intellectual property[2].Intellectual property theft have become a menace to the academia. This has brought hardship to academic entrepreneurs in area of income generation, hence this research is apt in the Harmonization of entrepreneurship and innovations carried out in tertiary institutions using intellectual property policy in order to: To protect the rights of the entrepreneur with commercialization of products from tertiary institutions and to control all the products, To ensure that products from entrepreneurial activities from the tertiary institutions are readily available to the general public, using technologies transfers of different processes: To ensure that

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compliance with laws and regulations are strictly adhered to, and also helping to obtain funding for entrepreneurial projects in the university, To ensure that tertiary institutions are knowledgeable on all that covers the intellectual property systems and also to teach the academia on how to acquire the intellectual property rights of Entrepreneurial Innovations as a result of practices of Entrepreneurship and To create Internally Generated Revenue (IGR) to the tertiary institutions and then help to Patent Innovations, acquire trademarks, trade secrets and protect ownership rights. The National Office for Technology Acquisition Promotion (NOTAP) is an agency that encourages an efficient process for identifying and selecting foreign technologies[3].NOTAP is encouraging the assessment of commercial ideas, setting up of spin- out companies, preparations of business plan, access to venture capital and market research and evaluation[4].Intellectual property (IP)offices are to be built in tertiary institutions and should have office managers, Lawyers, Accountants, Innovation advisers, Project managers, marketers and Scientific officers –Evaluators that will expand future researches and ensure new products are taken to the market[5].For Intellectual property development in Nigeria to thrive, there should be a National intellectual property policy, high level of investments in research and development activities and a strong partnership between industry and research centre’s[6].The mind set of Nigerian researchers should be changed using a high awareness of intellectual property by encouraging a high commercial content of indigenous intellectual property results[6].

Significance of the Study

This study will help to contribute to the needs for entrepreneurs to use intellectual policies to reduce/eradicate intellectual theft. Innovation will henceforth use action plan (intellectual property policy) to guide their commercialization practices and reduce ignorance. The study will help to increase campaign and sensitization of the academia on the need for intellectual property policy to drive innovations and entrepreneurship in tertiary institutions.

Scope of the study

The scope is focused on appraisal of intellectual property policy in tertiary institution and the proper awareness of intellectual property policy to improve tertiary institutions in Nigeria, specifically, Igbinedion university okada. Okada town has good social amenities like maternity, General Hospital, Primary and Secondary School all over the communities, market for various business transactions, electricity supply and good road networks that connect the town to other towns and villages. Transportation is very easy to get when traveling to any part of Edo State. Hence, Researches carried out in okada town, are researches done in a university community.

Sample Size

Respondents were drawn from the population of Igbinedion university okada. Young people, unmarried as well as students. A total of three hundred and eighty six(386) respondents were randomly selected from the locality.

Sample Design

Simple random sampling was used in this study. The choice of using the chi-square technique was to enable the researcher select respondents without showing or portraying bias for any personal character so that reliable and valid data could be collected.

Data Collection

The source of data used in this study is questionnaire which is the only instrument for the researcher.

Questionnaire Design

The questionnaire ensured uniformity and consistency in the questions that were asked and were structured with both open and closed ended questions. The questions were directed towards finding out the need for the sensitization of the academia on issues of intellectual property policy and how it can be used to drive innovations and entrepreneurship in tertiary institutions.

Data Analysis

The data was analyzed using the chi-square test. The data was first coded, altered, tabulated and then interpreted as they relate to each of the research objectives.

Data presentation, analysis and hypothesis testing:

Data collected from the field was tabulated, coded and analyzed based on simple frequency and percentage.

The table 1, deals with section A of the questionnaire. This section is devoted to those of the opinion whether or not to enforce intellectual property policy. The analysis is thus:

Table 1: Distribution of the respondents by their opinion whether to enforce intellectual property policy in tertiary institutions.

| Option | Frequenc y | Percentage |
|---|-----------------------|-------------------|
| Do not enforce intellectual property policy | 151 | 39.1 |
| Enforce Intellectual property policy. | 235 | 60.9 |
| Total | 386 | 100 |

Source: Field survey, 2019

Table 1 shows that 151 (39.1%) of the respondents declined. 235 (60.9%) of the respondents were of the opinion that intellectual property should be enforced in tertiary institutions.

Table 2: Age Distribution of Respondents

| Option | Frequency | Percentage |
|--------------|------------|------------|
| 16 – 25 | 122 | 31.6 |
| 25 – 34 | 108 | 27.9 |
| 34 – 43 | 94 | 24.4 |
| 44 and above | 62 | 16.1 |
| Total | 286 | 100 |

Source: Field survey, 2019

Table 2 shows that 122(31.6%) of the respondents were age 16 – 25, 108 (27.9%) were age 25 – 34, 94(24.4%) were 34 – 43; 62 (16.1%) were age 44 and above. The respondents between the age of 16 and 34, were of the opinion that intellectual property should be enforced in tertiary institutions

Table 3: Status of Respondents

| Option | Frequency | Percentage |
|--------------|------------|------------|
| Students | 152 | 39.3 |
| Lecturers | 234 | 60.6 |
| Total | 386 | 100 |

Source: Field survey, 2019

Table 3 shows that 152 (39.3%) of the respondents were students and 234 (60.6%) of the respondents were Lecturers. Lecturers who mostly are researchers, were of the opinion that intellectual property should be enforced in tertiary institutions.

Table 4: Cadre Distribution of the Respondent

| Option | Frequency | Percentage |
|------------------|------------|------------|
| Professors | 198 | 51.2 |
| Readers | 70 | 18.1 |
| Senior Lecturers | 118 | 30.5 |
| Total | 386 | 100 |

Source: Field survey, 2019

Table 4.4 shows that 198 (51.2%) of the respondents were Professors, 70 (18.1%) were readers, and 118 (30.5%) were Senior lecturers. Professors and senior lecturers were of the opinion that intellectual property should be enforced in tertiary institutions with a high percentage compared to Readers with only 18.1%.

Table 5: Educational qualification of Respondents

| Option | Frequency | Percentage |
|--------------|------------|------------|
| PhD | 201 | 52.0 |
| M.Eng | 102 | 26.4 |
| B.Eng | 83 | 21.6 |
| Others | - | - |
| Total | 386 | 100 |

Source: Field survey, 2019

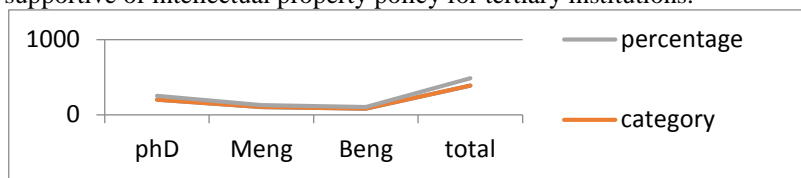
Table 5 shows that 102 (26.4%) of the respondents had MEng, 201 (52.0%) had PhD and 83 (21.5%) had Bachelors degree, indicating that respondents with PhD were more of the opinion that intellectual property should be enforced in tertiary institutions, hence these group had more awareness of intellectual property policy and are more into research.

Table 6: Occupation Distribution of Respondents

| Option | Frequency | Percentage |
|-----------------|------------|------------|
| Young academics | 268 | 69.6 |
| Old academics | 100 | 27.0 |
| intermediary | 17 | 3.4 |
| Total | 386 | 100 |

Source: Field survey, 2019

Table 6 shows that 268 (69.6%) of the respondents were young academics, 100 (27.0%) were old academics, 17 (3.4 %) were the academics in the mid stream. The young academics were more excited about research and so were more supportive of intellectual property policy for tertiary institutions.



Source: Field survey, 2019

Table 4.7 shows that 309 (80%) were not aware or were not enlightened about intellectual property policy in tertiary institutions. 77 (19.9%) were aware. The percentage of awareness is low. hence, Enlightenment campaigns should be carried out

Table 8: Source of awareness Distribution of Respondents

| Option | Frequency | Percentage |
|--------------------------------|------------|------------|
| Radio/Television | 10 | 3.6 |
| Conferences/workshops/seminars | 368 | 95.3 |
| Newsletters/books | 8 | 1.1 |
| Others | - | - |
| Total | 386 | 100 |

Source: Field survey, 2019

Table 8 shows that 128 (33.1%) of the respondents source of information were from Radio and television, 156 (40.4%) of the respondents source of information were from conferences, workshops and seminars, 102 (26.4%) were from books and newsletters.

Table 9: Distribution of Respondents by discussion of conferences ,workshops and seminars.

| Option | Frequency | Percentage |
|--------------|------------|------------|
| Yes | 368 | 95.3 |
| No | 18 | 4.7 |
| Total | 386 | 100 |

Source: Field survey, 2019

Table 9 shows that 368 (95.3%) of the respondents get information on intellectual property policy by attending workshops, seminars and conferences, 18 (4.7 %) of the respondents do not attend workshops, seminars and conferences.

Table 10: Distribution of Respondents by Method of Policy they are using

| Option | Frequency | Percentage |
|--------------|------------|------------|
| Yes | 85 | 22 |
| No | 301 | 77.9 |
| Total | 386 | 100 |

Source: Field survey, 2019

Table 10 shows that 85 (22%) of the respondents are currently using intellectual property policy planning, 301 (77.9%) were not using intellectual property policy, indicating that Intellectually property policy is not popular yet in tertiary institutions, hence there is urgent need for enlightenment campaigns to create adequate awareness.

Hypothesis Testing

Hypothesis I

Ho: Tertiary institutions are aware of intellectual property policy as a tool for harmonizing entrepreneurship and innovations.

Hi: Tertiary institutions are not aware of intellectual property policy as a tool for harmonizing entrepreneurship and innovations.

| Option | Observation(O) | Expectation(E) | $\frac{O - E}{0.5}$ | $\frac{(O - E)}{-0.5^2}$ | $\frac{(O - E)^2}{-0.5^2}$ |
|--------------|----------------|----------------|---------------------|--------------------------|----------------------------|
| A | 309 | 193 | 115.5 | 13340.20 | 69.1 |
| B | 77 | 193 | 115.5 | 13340.25 | 69.1 |
| Total | 386 | 386 | | 100 | 138.2 |

Source: Field survey, 2019

Chi-square formula = $\frac{(O-E)}{-0.5^2}$

Degree of freedom = Df = (C-1) (r - 1)

$$Df = 2 - 1 = 1$$

$$P > 0.05$$

$$\text{Calculated value} = 138.2$$

$$\text{Table value} = 3.84$$

Given the above result, the calculated chi-square X^2 is 138.2, is greater than table of value 3.84, the null hypothesis (H_0), which states that Tertiary institutions are aware of intellectual property policy as a tool for harmonizing entrepreneurship and innovations is rejected, while the alternative hypothesis (H_1) which states that Tertiary institutions are not aware of intellectual property policy as a tool for harmonizing entrepreneurship and innovations is accepted.

This declared that Tertiary institutions are not aware of intellectual property policy as a tool for harmonizing entrepreneurship and innovations

Summary of Hypothesis

- i. Igbinedion university community are not aware of intellectual property policy as a tool for harmonizing entrepreneurship and innovations.
- ii. Igbinedion university community attitude towards intellectual property policy is negative.
- iii. The major way to enlighten Igbinedion university community is highly based on organization of conferences, workshops and seminars methods.
- iv. The hindrances to the awareness of intellectual property policy as a tool for harmonizing entrepreneurship and innovations in Igbinedion university, is proper enlightenments.

Summary of Findings

The reason for this study was to find out and know the hindrances to the harmonization of entrepreneurship and innovations in Igbinedion university .

Research questions based on this study were raised to guide the study, data used for this study were based on questionnaires of three hundred and eighty six (386) respondents cut across Igbinedion university community in okada town.

In the course of carrying out this research investigation, it was discovered that all the respondents that were interviewed have heard of intellectual property policy from different sources like media houses and so on.

Despite the awareness of intellectual property policy and its benefits, the study revealed that it acceptance is still very low due to the poor awareness level.

It was also discovered that education is one of the main factors influencing the acceptance of intellectual property policy, the more educated the people were, the better exposed to the use and practices of intellectual property policy which means the uneducated persons, practiced less of intellectual property policy usage. Finally the harmonization of entrepreneurship and innovations in Igbinedion university, will not only optimize positive outcome of entrepreneurship practices but also recognize intellectual property policy as a key driver to the harmonization of entrepreneurship and innovations and make the university knowledgeable about intellectual property policy that exist in Nigeria for intellectual property rights.

CONCLUSIONS

In conclusion, intellectual property policy have been established as the major means of harmonizing entrepreneurship and innovations in tertiary institution. Having carried out a critical assessment, I hereby recommend that: Enlightenment of the academia on intellectual property policy importance and benefits should be done using seminars, workshops, conferences, radio, television and newspaper houses to enlightene the public. Tertiary institutions should be assisted to obtain funds for research that are sponsored at all levels in order to build and assist all entrepreneurial projects in tertiary institutions, commercialize them and ensure that the rights of entrepreneurs are protected and every product from the entrepreneurial researcher, is controlled using intellectual property policy.

APPENDIX 1.

Directorate of Intellectual Property and Technology Transfer Office (IPTTO).

Igbinedion University Okada, IUO

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QUESTIONNAIRE

I am a staff of the Directorate of Intellectual Property and Technology Transfer Office (IPTTO) in Igbinedion University Okada (IUO).

This is a research questionnaire on the “Intellectual Property Policy, a tool for harmonizing entrepreneurship and Innovations in tertiary institution using chi-square”.

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Please, I would like you to assist me by supplying the information required in this questionnaire. Feel free to answer the questions honestly to the best of your ability. Your responses will be treated with confidence and will be used for purely academic purpose.your name is not required.

Thank you.

SECTION A

Instruction mark (✓) in the appropriate box, which will indicate your answer to each of the question below and marking (X) in the box will indicate your disagreement to the question.

1. Cadre: (a) Professor { } (b) Reader{ }c. Senior Lecturers{ }
2. Age: (a) 18-27 { }, (b) 28-37 { }, (c) 38-47 { }, (d) 48 and above { }
3. Educational qualification: (a) PhD { }, (b) MEng { }, (c) BEng{ }
4. Have you ever heard of Intellectual Property Policy? (a) Yes { }, (b) No { }
5. From what source? (a) Academia { }, (b) Media { }, (c) conferences, workshop, seminars etc{ }.
6. Have you ever invented anything? (a) Yes { }, (b) No { }
7. Do you have a robust knowledge of entrepreneurship? (a) Yes { }, (b) No { }
8. Intellectual property means ideas, innovations, creativity, Novelle works and creative mind works. (a) Yes { }, (b) No { }.
9. Entrepreneurship is setting up businesses, taking on financial risk in the hope of making profit. (a) Agree { }, (b) disagree { }
10. Entrepreneurship and Intellectual property are related. (a) Agree { }, (b) Disagree { }.
11. Intellectual property policy? Have you heard about it before? (a) Yes { }, (b) No { }.
12. An action plan adopted by a University for proper managing of the University's assets derived from activities of entrepreneurship is an intellectual property policy. (a) Yes { }, (b) No { }.
13. Have you heard about trade secrets, trademarks and patent before? (a) Yes { }, (b) No { }.
14. Commercialization of inventions from tertiary institution, will help to create internally generated revenue (IGR). (a) Yes { }, (b) No { }.
15. Research outputs used intellectual property policy to fully commercialize them and protect the rights of the researcher. (a) Yes { }, (b) No { }.
16. Intellectual property policy ensures that Universities are knowledgeable about the intellectual property systems and teach academia how to acquire the intellectual property rights to entrepreneurial innovations through entrepreneurship. (a) Yes { }, (b) No { }.
17. Intellectual property policy ensures that there is strict compliance with applicable rules and regulation by helping to obtain funds for researchers at all levels, to build entrepreneurial projects for the Universities. (a) Yes { }, (b) No { }.
18. Intellectual property ensures that products from entrepreneurial practices in the tertiary institutions are readily available to the public by using various processes of technology transfer. (a) Yes { }, (b) No { }.
19. All products from the entrepreneurial research, is controlled using intellectual property policy. (a) Yes { }, (b) No { }.
20. Intellectual property policy is an action plan that fully protects the rights of the entrepreneurs who have commercialize results in tertiary institutions. (a) Yes { }, (b) No { }.

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