

The Urgency of Intellectual Property Rights (IPRs) in Higher Education

Zulfikri Toguan^a, Heni Susanti^b ^aLecturer in the Faculty of Law, Universitas Islam Riau Pekanbaru Jl. Kaharuddin Nasution No. 113 Marpoyan Stop in Pekanbaru 28284, Email: zulfikripohan@law.uir.ac.id, ^bheni@law.uir.ac.id

Qualified researchers and lecturers with Intellectual Property Rights (IPR) certification, working in higher education (according to article 20 of Law Number: 20 of 2003, concerning the National Education System) are required to conduct research. The public and the industrial world can use the results of these studies. Between 2012 and 2018, Riau Islamic University has succeeded in publishing a great deal of research, yet there are no patent rights. How can the potential for IPR certification be achieved, and what needs to be done to increase the chances of IPR certification? These are the two issues that guide this research. The implementation of this research was due to the support of the UIR Rector through lecturer research activities organized by research and community service institutions. It is hoped that these results can add to the literature in the development of science in the field of IPR and might offer further input for UIR leaders in policy-making aimed at improving the research results of lecturers who obtain IPR certificates. The output of this study may explain the results of research at the Research Institute and Community Service of the Riau Islamic University; at least once, there has been published in an accredited National Journal. This type of legal research is empirical normative, which concerns the examination of the behavior of the community (UIR research lecturers) towards the laws governing IPR issues, and the results will be disclosed descriptively. The approaches taken in this study are the statutory approach, the conceptual approach, and the applied approach. Data was obtained from library materials and directly from the study site, in the form of interviews and questionnaires. The data was then analyzed inductively, from general matters to specific matters using analytical descriptive and intensification methods (development of the interpretation of laws and regulations). The results showed that the potential of UIR in obtaining IPR was quite large since there were 1,025 research reports from 2012-2018 that had been reported to research and community service institutions and were classified into two parts. Potential patents for the exact sciences were 223 and non-exact as many as 802 of that number turned out to be only 5 with potential IPR patent category and the rest are only non-patent (copyright), the potential weaknesses are general there is no patent rights.

Keywords: *IPR lecturers, patents, industry*



Introduction

IPR can be used as a benchmark for the economic progress of a nation. The more IPR certification a country has, the more a nation can be said to be economically advanced. Therefore IPR certification is a benchmark connected to the economic development of a nation (Sigit, 2015). According to the 2017 data on World Intellectual Property Indicators, Indonesia ranks 112th in terms of patent rights registration, Malaysia ranks 37th and Thailand stands at 54th. In national data, UNY shows as being top followed by UPI Bandung, ranked at 13th place, while Semarang State University was ranked at 16th. Higher Education data, which falls under the auspices of the Director-General of Islamic Religious Education (PTIKI), reported the number of IPR lecturers in 2018 as being 1,632.

In terms of Institutional (University) assessment, the existence of research conducted by lecturers carries important weight since it shows an indicator of assessment of 30%, for the ranking of the Higher Education Ministry of Higher Education version of 2017. Other aspects of accreditation were 28%, lecturer adequacy was 18%, lecturer quality and student quality were 12%. However, the presence of IPR has not been realized by the majority of the Indonesian people. The term IPR was altered to IPR based on the Minister of Law and Human Rights Decree No. M.03 / PR.07.10 of 2000 (Decree of Kep. Menpan No. 24 / M / PAN / I / 2000). One of the ways that we can measure the extent of the community's understanding of HAMI is by observing how many of the findings produced have been patented (Syafrinaldi, 2010).

During 2012 – 2018, the Riau Islamic University successfully published 1,025 research reports in LPPM, yet only 31 of the registered research results obtained IPR and all of them were in the copyright category. This is in spite of the fact that the scope of IPR extends to not only copyright, but also patent rights, trademark rights, rights to industrial property and protection of plant varieties. The entire IPR should be fulfilled by lecturers, because at UIR there are many faculties who are ready to fulfill the IPR needs, such as the copyright pertaining to non-exact research fields (Law, Teacher Training, Social and Political Sciences, Economics, Psychology and Religion). Likewise, to meet IPR in the field of patents, brands, industrial designs and protection of UIR plant varieties, it has exact faculties such as those of Agriculture and Engineering.

Information on the results of the research above raises the question: Why is the number of research results that are obtained by IPR so low? Furthermore, how large is the potential of the results of the lecturers' studies that will obtain IPR certification? This question needs to be answered in order to enact policy that increases the acquisition of IPR from the results of lecturer research as a benchmark for the high quality of lecturers.



If compared to other similar universities (such as UMMI in 2017), there are two instances of IPR productivity, in the form of two pieces of patent, one of which has been commercially marketed, (namely, the coagulator waste processing machine). The IPRs granted amounted to 11; the number of IPRs that have been registered (not yet granted) totalled 11. The number of IPRs has the potential to amount to 30 units.

The importance of IPR certification for lecturers' research results is so that lecturers, and other researchers, are legally protected. This is in accordance with the government's objective regarding issuing legislation in the field of IPR, namely, exclusive rights granted by the state to its holders or inventors(creators, designers etc) as an appreciation of their original work and a motivation for others to develop it so that the research results of researchers can be used by the wider community.

A look at the development of legislation in the field of IPRs shows that it has existed since the 1840s. The Dutch Colonial Government introduced the IPR Law of 1844, Trademarks in 1855, Patents in 1910 and Copyright in 1912. At the time, Indonesia had been a member of the Paris Convention for the Protection of Industrial Property since 1888 as well as a member of the Berne Convention for the Protection of Literacy and Artistic Work since 1914. During the Japanese occupation of 1942 to 1945, all these regulations remained in force. On August 17, 1945, according to the transitional provisions of the 1945 Constitution: "... All legislation from the Dutch legacy remains in force as long as it does not conflict with 1945 Constitution". However, the Patent Law is considered contradictory because the examination of Patent results must be carried out in the Netherlands.

There were 1,025 UIR lecturer research results during 2012-2018 that require legal protection. This six-year period is used as the basis for the focus of this research. The objective is to get a lengthier picture of the development of lecturers' research results that are reported to LPPM. The researchers of this study contend that a longer time span would yield more data that would support the conclusions of the research. Using this period of time is further useful for analysing a the virtues of the management of the Riau Islamic University, not to compare and justify that one management group is greater than the other, but to see the consistency of research managed by LPPM in obtaining IPRs.

Once the importance of legal protection for the lecturers' research results has been established, it is necessary to conduct a study in order to find out which factors inhibited the low IPR certification of lecturer research results at Riau Islamic University during 2012-2018. The reason that period needed to be investigated is because during that time there was two different leaderships. with the vision of becoming a superior Islamic University in



Southeast Asia in 2020. Subsequently, article 20 of Law Number 20 of 2003, concerning the National Education System, required universities to produce quality research, one of which is the quality of the acquisition of IPR certification. This IPR certification could be used in the future as collateral for international banking, depending on the country and regulations designed for its effective implementation (Srimulyani, 2010).

IPR Scope and Regulation

In general, the scope of IPR covers two parts which are grouped by type (Margono, 2010) which includes: Copyright, Patent Rights, Trademark Rights, Industrial Design Rights, circuit layout rights, trade secrets, geographical indications and protection of plant varieties. With so many types of IPRs, only plant variety protection is not licensed by the Director General of IPR but is instead under the Director General of Games. This is regulated by each law such as Law Number 30 of 2000 concerning trade secrets, Law Number 31 of 2000 concerning trademarks, Law No. 32 of 2000 concerning circuit layout, Law number 29 of 2000 concerning plant varieties. UU no. 13 of 2016 concerns patents. UU no. 15 of 2001 concerns brands. UU no. 28 of 2014 concerns Copyright.

Copyright is designed to provide exclusive rights for the creator who is unprotected by law from the threat of others; that particular right is provided by the state and has economic value. A Patent conveys special rights granted to inventors for their findings relating to technology and also has economic value, as in the case of giving permission to others to use by charging royalty rights. A brand is a "sign" in the form of a picture, name, word, letters, numbers, colour arrangement or combination of these elements, has the power of differentiation and is used in the trading of goods and services. Industrial design refers to creations of shapes, configurations or compositions of lines and colours, or combinations that are three-dimensional or two-dimensional, and can be used for goods, industrial commodities or handicraft products. Integrated Circuit Layout Design (ICLD) relates to three-dimensional design of various elements, at least one of the elements active as or all connected in preparation for integrated circuits. Integrated Circuit Layout Design Rights (ICLD) offers exclusive rights, granted by the State of the Republic of Indonesia, to the designer for his creation, for a certain period of time, or via approval to other parties to exercise these rights. Geographical Indications relates to a sign that indicates the area of origin of an item, which due to geographical environmental factors (including natural factors, human factors, or a combination of the two) affords certain characteristics and qualities to the goods produced. Trade secrets refers to Information that is not publicly known in the field of technology and / or business, has economic value because it is useful in business activities, and is kept confidential by the owner of trade secrets. It includes production methods, processing methods, sales methods, or other information in the field of technology and / or business that has economic value and is not known by the general public. Plant Varieties Protection (PVT)

relates to protection of plant groups of a particular species, according to the shape of the plant, leaves, fruit, seeds, etc. and at least one trait, and if propagated does not change.

Potential and Urgency of IPR Certification

According to the Indonesian General Dictionary (KUBI) potential refers to abilities that have the possibility of being developed. Urgency refers to an urgent necessity or highly important thing. IPR certification is a document which includes protection for the owner for his work in the intellectual field against threats from other parties. Protection also has an economic quality. The results of intellectual works in practice can be in the form of inventions in technology or creations in other fields (Dewi, 2016).

The need for this protection is because the owner has produced original works, which have usually involved personal time and sacrifice, and this protection is provided by the state.. It can be viewed similarly to a farmer who has cultivated and caretaken a farm and therefore has a right to the benefits of the harvest. Therefore, intellectual work must be protected by the state from the threat of other parties.

The state protection of IPR owners from the country born at once the owner can prove its creation or findings, actually do not have to wait for IPR certification to come out of the government because the process of obtaining IPR especially patents requires a long time, not until when the process of processing there are other parties who intend to maliciously mimic and develop the findings, so that the proposition has not been registered, the imitating party is free from sanctions for actions that mimic the findings of others, this needs to be considered (DG IPR: 2015).

There are numerous factors governing why many researchers have not obtained IPR. It can be due to the lack of incentives in financing the IPR discovery process, such as patents; the cost of even one patent invention is considerable and since it is related to technology, the process can take a long time. This incentive needs to be taken into further account, because Peneluti has spent his time in the library and his living needs should be borne by the institution or government. Therefore, it is necessary to strive for various incentives and types of awards with a view to improving research towards obtaining patents (Eddy, 2016).

In order to possess legal certainty, the findings on IPR must be registered, and therefore are a matter of record. Registration offers legal protection for researchers. Therefore, it is important for researchers to immediately register their findings, so as not to be threatened in the future from irresponsible parties. This registration is so important that the law requires IPR owners to register their rights and every registered right is verified by a certificate of registration (Abdul, 2007).



Many events have occurred that could harm IPR owners, for example, piracy. Violations such as piracy, counterfeiting and plagiarism of intellectual works, have given Indonesia a Priority Watch List ranking. This is a ranking that is considered serious, and can carry consequences of economic retaliation, such as a reduction of quotas, eliminating the General System of Preferences by the United States, Seritakat and other developed countries (Hemdra, 2015).

As a result of the actions of other parties which can be detrimental to the inventor, owners are required to immediately register their findings. This ensures against interference from other parties, and registration provides a basis for the participation and protection of the state for the holders of IPR. Prevention is more efficient than efforts to resolve violations, especially as legal proceedings can incur at least two losses; the first occurs due to rights that have been violated, and the second stems from the result of potentially high legal costs.

As professional researchers, lecturers are scientists with the main task of transforming, developing, and disseminating science, technology, and art through education, research and community service. Article 60 of Law No. 14 of 2005, About Teachers and Lecturers, requires lecturers to carry out their duties in research and community service. In the Riau Islamic University environment, yearly research continues to be improved. This is especially so especially during the leadership period of the Chancellor Prof. Dr. Syafrinaldi, SH., M.CL. Research and community service are significantly promoted because due to the vision and mission of becoming a superior university in 2020 Asia.

Southeast. LPPM UIR Report 2018 IPR Certification only 31 Research from 1,025 lecturer research reports and all IPR certifications are Copyright. This condition is certainly not in line with the vision and mission of the university, therefore it is necessary to study what causes the low IPR certification among lecturers and discern what solutions might be found in order for research to increase in the future.

By encouraging universities to develop research results with IPR certification the government of Indonesia has provided many opportunities. Among others, the Potential IPR program (UBER-IPR) has conducted an analysis which shows that the research results of lecturers in various tertiary institutions provide opportunities for registration of IPR. Therefore, in 1999-2000, there was a facility granted which allowed for the financing of the registration of IPR, especially for patents, as mandated by Law No. 14 of 2001.



University Policy regarding IPR Certification

The mandate of the Higher Education Law No. 18/2002 refers to the National System for Research, Development and Application of Science and Technology. Article 13, paragraphs (3) and (4) mandate that tertiary institutions can be one of the institutions that must conduct research, disseminate information on the results of their research and develop Intellectual Property without reducing the interest of intellectual property itself. The article also mandates that universities must form IPR centres as a forum for managing and disseminating information about IPRs, and as centres for IPR services marketing the results of their research.

This research is so important to the country that arrangements are made specifically, and the importance of IPR certification is further evident in the Act. It is also necessary to make special institutional arrangements for each university that deals specifically with IPR potential, facilitate the certification process and collaborate with the industrial world to market all research results that have been collected. Logically, with the existence of a separate institution, it is hoped that it will be faster to increase the acquisition of certification from the research results of lecturers in tertiary institutions, even though this law also regulates the need for research institutions in the regional government environment.

Responding to the mandate of the Law, UIR has formed an IPR Centre in the hope that the existence of IPR Centres could become a forum for consultations among researchers in the UIR environment, that it could become a facilitator in the process of organising IPR certification, and that it might be a partner in marketing IPR products economically. Likewise, in his remarks when establishing this institution, the Chancellor expressed hope that the IPR centre could maximise the potential of research results at UIR in cooperation with the industrial world.

In addition to the establishment of IPR Centres which emphasise the potential of research in the UIR environment, various Chancellor's policies also reveal strong support. For example, increasing the potential of the Institute for Research and Community Services (LPPM-UIR), by providing research and community service budgets to the community which increase significantly each year, such as the following:

In addition to utilising research funds from within the University, UIR also encourages researchers to take advantage of research funding from the government, namely, Higher Education Research Funds from the Ministry of National Education. For this activity, UIR has obtained national research funding every year. For 2019, UIR has succeeded in obtaining grant funding from the Directorate of Higher Education through the receipt of research



proposals and the devotion of 74 lecturers. Compared to last year, this increased by 100% according to 34 proposals received (Goriau, 2019).

With this potential in the UIR environment, the issue of funding and human resources in developing research to obtain IPR certification is no longer a problem. For the results of research in the field of patents and cooperation with the industrial world, however, it is still inferior to other similar universities. For example, at the national level, the level of UIR is still at the 168th level of 543 tertiary institutions in Indonesia. This position is still below similar universities in Java, such as Bandung Islamic University at number 57, Sultan Agung Semarang sequence at 48, Malang University sequence at 165, but it is above the Imam Bonjol Padang State Islamic University at 230 (Unirank,2019).

The ranking of this tertiary institution is judged based on various aspects, and as an indicator used in giving rankings to 2017 universities, namely: for aspects of human resources (30%), the benchmark is the number of lecturers who have a doctorate degree, the number of lecturers who have held the position of chief associate professor and the ratio of the number of students to the number of lecturers. The second aspect, institutional score (28%), with the benchmarks of BAN Accreditation of PT. The number of study programs that have been accredited, especially the value of A, in addition to national as well as international accreditation and the number of foreign students. The third aspect relates to student affairs (12%), the benchmark of which is the performance of students in the field of scientific and entrepreneurial work. This is as well as aspects of research and community service with an assessment weight (30%). The yardstick for this is the large number of lecturers' research and the acquisition of IPR certification, and the number of people as well as the number of lecturer articles published in national and international journals, as indexed by each lecturer.

Therefore, it can be understood that the policy of the Riau Islamic University, in encouraging the increase in the results of lecturers' research, is highly appropriate because the percentage of the assessment is quite large, namely 30% equivalent to the aspects of the Human Resources (HR) assessment. In addition to pursuing the percentage of the fulfillment of the assessment, with the increase in research results of lecturers who are certified by IPR can increase the independence of lecturers economically, because the research results that have obtained a patent can then collaborate with the industrial world in developing it will obtain a sustainable economic value because it will receive royalties on the use of patents by the industrial world.

Therefore, it is clear that the role of IPR consultants is not merely an administrative complement to obtain an IPR certificate The role of IPR consulates can also be an institution that will protect researchers so that their research results are not disturbed by other parties. This will protect researchers from a legal perspective against criminal offenses. Therefore,



researchers really need the presence of IPR consultants in order to pre-register IPR, and consultants, and IPR results, may even be of use to the industry.

Indeed, the role of the Central IPR at the Riau Islamic University does not meet the provisions of the PP to act as an IPR consultant, but that role can be developed and if necessary, be assigned a number of lecturers from the law faculties to attend education in the IPR field in order to gain competence in providing services to researchers. This is highly possible and would mean that researchers are actually served by people with special abilities in the field of IPR which in turn will accelerate certification, provide certainty in submission of registration and facilitate legal protection in case of interference from other parties.

Mapping IPR on Lecturer Research Results

From the recapitulation of the LPPM UIR report, there are lecturers' research results as many as there are that are distinguished from the exact and non-exact research results. This classification is made so that it can be understood that the number includes potential groups of IPR according to its type, whether relating to Copyright or Industry. To obtain a description of the classification, the following data refers to the number of research reports recorded by LPPM UIR for the period 2012 - 2018. The exact category means, the field of science that studies certain things which are considered empirical: namely, Engineering, Mathematics and Natural Sciences, Agriculture. Non-exact sciences refer to science that is outside the exact sciences, regarding the public or public interests, such as social science, law, politics, economics, and teacher training. This classification is only based on the author's practical thinking in order to map how much potential IPR there is in the field of patents; and for exact research fields and potentially non-patent fields such as copyrights, brands, industrial design, etc. Because if the exact science field of IPR field that can be classified is Patent, while Non-exact science is usually the field of IPR Copyright, trademark, trade secret, etc.

From the above data, it can be analysed that the amount of research from the exact sciences (21.76%) is less than the non-exact sciences (78.24%), meaning that the potential to register research findings by lecturers in the exact sciences with a type of IPR patent is less than the potential to obtain IPR certification with no patent. This comparison is important in order to obtain a picture to accelerate the acquisition of IPR in the field of patents that still need to be encouraged in order to increase, especially since various transactions need to be made so that the exact sciences researchers can increase their research. While the potential of non-exact IPRs is sufficient because there are more than the exact sciences, but this is when compared to similar universities, especially those in Java which still need to be improved.



This exact research category report has the potential to obtain an IPR certificate that includes a Patent. Law No: 13 of 2016 concerning Patents, successor to Law Number: 14 of 2001. Patents are exclusive rights granted by the state to an inventor (person or persons) for the results of his invention in the field of technology for a certain period of time carrying out his own invention or under approval to other parties to implement it (article 1 number (1) of the Patent Law). Inventions which can be protected by law are those that fulfill the provisions of article 2 and article 3, paragraph (1), namely: the invention in technology, which is relatively new, has an inventive value (non-obvious) in new discoveries of technologies that already exist and can be applied in the industrial world.

Inventors who will become patent holders must register their findings with the Director General of Intellectual Property Rights of the Republic of Indonesia, Ministry of Law and Human Rights (HAM), regulated by Decree of the Director General of Intellectual Property Rights at the Ministry of Justice and Human Rights Office Number: H-08-PR.07.10. (Tahun, 2000). The registration procedure requires administrative and bureaucratic preparation time, so for a researcher who also has to register his own findings it can take a long time.

The procedure used in registering for this Patent is quite complicated, Each step included in the diagram above requires a separate document and registration is now online. Therefore, there is a growing sentiment that patent registration should be carried out by a separate institution, such as at the University level, and administered by an IPR Central, so that researchers do not waste time on the administration process.

After the registration process has been passed and the senadai has been received, there are rights that have economic value and moral rights to the patent. An inventor's rights to their inventions are to protect them so that other parties may not, without permission be involved in making, selling, importing, renting out, delivering, making available for sale, or leasing or delivering patented products or using a patented production process to make an object. Obligated to make or process their products in Indonesia, people are obliged to pay annual fees, either to the holder or the licensee.

Likewise, with the copyright registration procedure, also to the office of the Ministry of Law and Human Rights (HAM) of the Republic of Indonesia. Copyright registration procedure is different from patent IPR. In copyright registration it is sufficient to attach the copyrighted work alone not related to technology, especially now that there is an internet registration system through the government web portal. Copyright registration is easier. However, copyright registration also requires time to go back and forth to complete the data at the Riau law and HAM office, so it is recommended that this would be better managed by the IPR central.



From the results of this research, it is evident that there are no researchers at Riau Islamic University who have obtained patent rights. Some from the Faculty of Information and Communication are in the process of registering but researchers are overwhelmed with the registration system even though it is online, requiring their own expertise and patience. Precision is required in filling out material that will be included in the application as well as patience regarding the verification of data from the admin, so until now the patent registration has not been clarified.

Regarding copyright certification, of the total number of studies that have been carried out by LPPM UIR, with respect to 1,025 scientific works or researches that are not registered, there is no accessible data on how many have IPR certification, because LPPM is also overwhelmed in monitoring whether researchers have registered to obtain certificates for IPR. But in general, from the observation of researchers not yet taking care of IPR certification, the reasons vary; it was not collected by LPPM and the funds disbursed by LPPM were 100 percent, then the procedures to take care of it also took significant time from researchers who were also lecturers as well as further time to take care of the administration of IPR certification.

From the available data it can be clarified that: the research results of lecturers registered at LPPM UIR from 2012 - 2018 have already registered 1,025 research reports. This consists of as many as 223 exact sciences and 802 non-exact sciences research reports. Of this number not registered in the LPPM UIR report recap of the status report of each researcher whether or not they had obtained IPR certification, so researchers tried to obtain data through wa and surrogates to researchers who were registered from the results. only a few people's copyright certificates.

Potential and Urgency of Intellectual Property Rights in Higher Education

1) Potential exact sciences for patent IPR certification

The fact that the number of lecturers 'researches are as many as 1,025 reports at LPPM UIR shows that there is a large potential for IPR certification. This includes both the IPR certificate in the field of patent for the exact research report and the IPR certificate in non-patented fields such as copyright. If all the results of this study can be processed to obtain the IPR certificate, then the achievement of UIR in the top 100 national rankings will be achieved. There are 802 non-exact field research reports that have the potential to obtain copyright, trademark and trade secret certifications and 223 potential research reports that might obtain a patent.



How can this be achieved? There are several things that must be done based on the results of interviews and analysis of answers, namely, researchers generally want the process of IPR certificate registration to be done by the Central IPR UIR. The registration fee is charged to researchers by cutting the research budget that has been received, but researchers also want the budget for research to increase. This will make researchers further improve their performance so that the target of the university in terms of the acquisition of IPR certification is evidence of the implementation of lecturer research that can be carried out.

The issue of the need for this certification for improving university grades is correct. There is a score of 30 percent for this with indicators of the results of lecturers who are indexed by SCOPUS. To get research results listed in internationally accredited journals, such as SCOPUS, it is not easy and one has to work hard. There are academics who have conducted research for ten years, yet none of their results can be included in SCOPUS journals. Tole Sutikno however, who is a lecturer in Electro engineering at the Ahmad Dahlan University in Yogyakarta, graduated from S3 UTM Malaysia, and was able to publish 22 indexed journal articles in SCOPUS within one year. There are several strategies that might help people to graduate in the journal:

- 1) Know the market, remember prospective readers and find out what areas your audience likes.
- 2) Submit a professional, well-written manuscript, paying close attention to Contents and Presentations. The benefits of research for the community need to be known in order to convey writing in a clear manner that is easily understood by the audience.
- 3) Frequent practice: The ability to write for a journal is not due to talent but skill; this will be honed if research is conducted often in the knowledge that writing report writing requires sharpened skills.
- 4) Write what is easiest for you, but those with a greater chance of being published in a journal will be those who are original. Innovative applications of older technologies is often good enough. "You get a publication if you are the first to write about something" (Hermann Maurer).
- 5) Make reviewers interested in your paper. Maybe your submission will even be more likely to be accepted if a reference to the reviewers' results is used.
- 6) Avoid plagiarism. Copy paste research results will be detrimental and will reduce the level of trust of all the researchers' writings.
- 7) Do not get bored. Researchers must be creative and not get bored correcting all the results of research. By continuously writing and improving more strategies to overcome boredom will be discovered, thus presenting the researcher with more opportunities to enter SCOPUS.

In terms of Sutikno's education as a Doctor, at UIR there are many of those with Doctorates in engineering who also graduated from Malaysia, so why can he do it while our Doctors



can't? With the number of existing studies, especially those conducted by researchers from the exact sciences, this needs to be developed so that research results of academics at UIR can help improve the assessment of this institution. This will also increase the economic value for researchers, especially if the results of the research are in collaboration with industry.

Researchers will tap into a large and sustainable economic base if the results of their research can penetrate the world of industry, such as in the case of researchers from the University of Muhammadiyah Sukabumi (UMMI). In 2015, they succeeded in obtaining a Patent certificate after successfully establishing their findings in the field of waste water management and water conversion by facilitating the program Uber Patent from the Ministry of Director General of Higher Education. Since 2012, these researchers have received research assistance from the Directorate of Higher Education, and in 2015, registered a patent. This establishes an economic opportunity that extends beyond pure research funds given the collaboration with industry.

From the number of research reports that are registered in the LPPM UIR exact disciplines above, according to the classification of types of research this field can be grouped which can be proposed to obtain a patent type IPR certification. However, from the amount of research that does not necessarily meet the requirements to be proposed to obtain a patent certificate, it needs to be chosen again that meets the requirements for patents, among others, meet the elements of technology and the invention is relatively new. To assess the researchers do not have the competence for that, the researchers only asked a number of researchers who according to the reading of the researchers have elements of technology, then asked the researchers whether they had been proposed to obtain a patent certificate or whether there were obstacles in the process of patent registration.

The results of interviews with some of the researchers mentioned above revealed that many already have information about patents, but they were unaware that patents have economic value for researchers. However, regarding the procedure for patent registration and registration of a contract with a third party, researchers did not generally know the procedures with any certainty. Researchers would prefer that the registration process and marketing of their research results were submitted to a separate body, namely the IPR Centre at Riau Islamic University.

Proposals from several researchers revealed a desire for a comparative study at the Islamic University of the Kind for potential researchers to obtain patent certification, for purposes of motivation and insight in managing patent certification facilitated by the university. The leadership of the University invited researchers to submit proposals stating that they would be considered for approval according to study prioritisation and considerations of urgency.



After the researchers conducted an inventory of the 2012-2018 research report at LPPM UIR, it with appeared that upon considering the criteria for technological elements and the type of new findings, there were only 5 out of 199 research reports that fulfilled the criteria.

Of the five results of the inventory of researchers from the total research results of the lecturers at LPPM, there are five research reports above that have the potential to obtain patents, but none have obtained the certificate. There is one report that has been processed but the researchers appear overwhelmed regarding how difficult the process is, and by the data needed to upload the results of their research. There are also researchers who think that the results of their research are not registered because they are trying to help the community; for example, the discovery of a nut stripper used by the community to facilitate farmers areca nut to peel the betel crop. Researchers don't want this invention patented, and contend that it should be left under the auspices of the farmers..

However, the observations of researchers in the absence of research results did not obtain a patent since 2012 until now 2019, because; LPPM does not emphasise research themes that must be done by lecturers, tends to be freed to research about anything so there is no increase in research results every year to map researchers must continue previous research finally research themes are not focused on whether to pursue patents or non-patents even there are researchers who jump around from agricultural disciplines also researching the field of law this makes the research results do not move towards the quality of IPR.

Potential of Non-Exact Science Fields for Non-Patent IPR Certification

The results of research in the field of non-exact sciences which have the potential to obtain IPR certification in the field of copyright shows that from 2012 - 2018 there were 1,025 research reports. 802 of them were from the field of non-exact sciences, and if specified, each faculty could be grouped rather than presented individually. This was done because the process of obtaining an IPR certificate with respect to copyright procedure is considerably simpler than applying for a patent. The patent application requires researchers to submit proof of machine tools and formulas, whereas copyright requires only registration of research results, a registration fee, and takes approximately two weeks to obtain the final IPR certificate issued.

A variety of researchers have responded to the issue of copyright, many of whom already have outputs in the form of publishing in journals, while others do not. When asked why they haven't been published in journals, some responded they have not yet decided which journals match their research themes. Do researchers realise their obligations to publish research outcomes that have been previously known? Since there is no sanction from the LPPM to



collect these outcomes, there are still researchers who have yet to look for appropriate journals as outputs.

In order to discipline each researcher to fulfill their research output obligations, some researchers have suggested holding research funds at the expense of research and asking the IPR centre to use these funds to finance the process of publishing research results to journals in accordance with the research theme. Researchers have also suggested that the research costs will be increased so research funds could be set aside for the costs of publishing in the Journal and IPR certification.

The potential research reports of lecturers registered at LPPM UIR from 2012 - 2018 in the non-exact sciences can be seen in the table below:

Number reports of inexact lecturer at LPPM per faculty 2012-2018

No	Year	Law	Education	Social	Economy	Islamic Studies	Psychology	Communication
1	2012	25	11	2	0	1	0	0
2	2013	8	67	2	0	5	2	0
3	2014	10	30	16	0	0	7	0
4	2015	18	20	7	10	4	8	0
5	2016	26	69	19	13	7	8	3
6	2017	25	58	13	16	8	6	4
7	2018	16	54	11	1	10	3	2

Source data LPPM, 2018

The biggest contributor to research reports was FKIP and the least was the Faculty of Communication Science. However, the Faculty of Communication Science became the smallest contributor because the faculty was only established approximately three years ago. Even though this faculty has many research reports, if they have not been published to an accredited journal that offers a research output in this field, the meaning is also not included in the quality research results, according to the National Education Law. The publication of research reports in this Journal has gone through a review process so that it can be said to be of quality, because it will be read and analysed by the review team who have knowledge in accordance with the field of research.

A number of researchers were asked why there were so many research results that have not been published in journals even though they have been named as targets for research outcomes in the report. Some answered that there were no rules from LPPM that force researchers to implement output targets when making proposals. Therefore, LPPM needs to engage in recording and collecting since this is so important for all those concerned. If the budget is expended then the registration of IPR certification will no longer be possible since



IPR registration at the Director General of IPR through the Indonesian Ministry of Justice and Human Rights requires a fee.

Some researchers were asked whether they would be willing to publish in suitable journals and for IPR registration to be submitted to the IPR Centre. In general they agreed since it would reduce the administration time involved for researchers. Although the cost of this was deducted from the budget received, in general, researchers agreed that as long as the process was fast and cheap, for research that had not yet been issued IPR, the researchers would ask the Chancellor for help.

Conclusions

The potential of the Riau Islamic University relating to research conducted between 2012-2018 is quite large, since there are 1,025 lecturers' research results in both the exact and non-exact sciences. The availability of yearly funds for research at LPPM can also be considered. The existence of HKI Centres as facilitators and marketing as well as the commitment of the leadership of the Riau Islamic University.

The potential to obtain IP certification both industry (patent) and copyright has not been maximally utilised, because none of the results of research has patent certification. The field of non-exact science features only copyright certification, with the number showing only 31 of 822 reports.

The urgency of research results in tertiary institutions obtaining IPR certification is the mandate of Law No. 20 of 2003 on National Education, so that Higher Education HR develops quality research that is research that has IPR certification, in addition to the mandate of the Law, this quality HR factor is one of the evaluation points for institutions / universities of 30%.

The things that can be done to improve the acquisition of IPR certification are: LPPM UIR must formulate research themes that will be carried out by lecturers, namely themes that have a market value, specifically in relation to patents that have technological elements which can be negotiated in cooperation with the industrial world. It is necessary to maximise the role of HKI centres as facilitators and marketing agents so that the results of their research can be in collaboration with the industrial world.

Suggestions

To compliment the conclusions of the results of the study above, the researcher suggests that: researchers also consider research themes that are acceptable to the market. With respect to



the leadership of the UIR, it is suggested that the role of the Intellectual Property Centre be reactivated, both to facilitate researchers and at the same time market the results of lecturer research reported to LPPM. It is further suggested that LPPM prioritise research in the exact sciences, especially engineering, in order to obtain a patent certificate. In this way it will be easy to know what preparations must be made in obtaining the patent. The UIR leadership is expected to assign the IPR centre to study this in depth by conducting comparative studies with universities that already have patent certificates.



REFERENCES

- Abdulkadir Muhammad. (2004). *Law and Legal Research*. Bandung: PT Citra Aditya Bakti.
- Abdulkadir Muhammad. (2007). *Study of Economic Law of Intellectual Property Rights*. Bandung: Penerbit PT Citra Aditya Bakti.
- Bambang Sunggono, (2005). *Methods of Legal Research*, Jakarta: Raja Grafindo Persada.
- Dadan Samsudin. (2016). *Intellectual Property Rights and their Benefits for the Research and Development Agency*. Patent Examiner at the Directorate General of Intellectual Property, Ministry of Law and Human Rights.
- Dewi Anggraeni. (2016) The Importance of Intellectual Property Rights Management for Litbangyasa Products. *Jurnal Surya Kencana Dua: Dinamika Masalah Hukum dan Keadilan* 3(1) July.
- Direktorat Jenderal Hak Kekayaan Intelektual, (2015) Patent Application Procedure. Retrieved from <http://www.dgip.go.id/ebscript/publicportal.cgi>, November 9.
- Eddy Herjanto, (2010) Understanding and Application of Patents in the Industrial Research and Development Center, Research Center and Study of Industrial Technology and Intellectual Property Rights. In Dewi Anggraeni. (2016) The Importance of Intellectual Property Rights Management for Litbangyasa Products. *Jurnal Surya Kencana Dua: Dinamika Masalah Hukum dan Keadilan*, 3(1) July.
- Hendra Tanu Atmadja. (2015), The Urgency of Protecting Intellectual Property Rights in the era of Free Trade. *Lex Jurnalica*, 12(3)
- Kausarian, H., Sri Sumantyo, J. T., Kuze, H., Aminuddin, J., & Waqar, M. M. (2017). Analysis of polarimetric decomposition, backscattering coefficient, and sample properties for identification and layer thickness estimation of silica sand distribution using L-band synthetic aperture radar. *Canadian Journal of Remote Sensing*, 43(2), 95-108.
- Kausarian, H., Sumantyo, J. T. S., Kuze, H., Karya, D., & Panggabean, G. F. (2016). Silica Sand Identification using ALOS PALSAR Full Polarimetry on The Northern Coastline of Rupert Island, Indonesia. *International Journal on Advanced Science, Engineering and Information Technology*, 6(5), 568-573.
- Kausarian, H., Batara, B., Putra, D. B. E., Suryadi, A., & Lubis, M. Z. (2018). Geological Mapping and Assessment for Measurement the Electric Grid Transmission Lines in



West Sumatera Area, Indonesia. *International Journal on Advanced Science, Engineering and Information Technology*, 8(3), 856-862.

Syafrinaldi. (2010), *Law Concerning the Protection of Intellectual Property in Facing Globalization Era*. Second Revision Edition, Pekanbaru: UIR Press.

Sri Mulyani. (2012), Development of Intellectual Property Rights as Collateral to get Banking Credit in Indonesia. *Jurnal Dinamika Hukum*, 12(3).

Suyud Margono, (2010). *Legal Aspects of Commercialization of Intellectual Assets*, Bandung: Penerbit Nuansa Aulia.

Direktorat Jenderal Hak Kekayaan Intelektual. (2008). Development Protection System of Intellectual Property Rights in Indonesia. *Buletin Informasi dan Keamanan Hak Kekayaan Intelektual*, 5(3).