



IPR Protection Benefits for Intellectual Property in a Higher Education to Improve the Competitiveness of the Higher Education as an Effort to Enhance the Acceleration of the Creative Economic Growth of Indonesia

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ABSTRACT

Intellectual property in a Higher Education is a means of competitiveness of the Higher Education. Hence sufficient protection needs to be utilized to enhance the creative economic growth of Indonesia. This study examines the protection of intellectual property in universities as a means of competitiveness of the universities and examines the benefits of intellectual property protection in Higher Education through IPR as an effort to increase the creative economic growth of Indonesia. This study used empirical normative juridical approach. The normative juridical refers to the principles, norms of national and international laws by reviewing literature data or secondary data consisting of primary, secondary, tertiary legal materials and using descriptive analysis research specifications. The result showed that the protection of intellectual property in universities has not been implemented effectively causing a lower competitiveness of universities. The benefits of intellectual property protection in Higher Education through the IPR as an effort to increase the acceleration of creative economic growth have not been effectively implemented. The barriers include lack of regulatory protection and management of IPR in universities in addition to the low level of knowledge about IPR of academic society members and the lack of an effective monitoring system of intellectual property rights in Higher Education. Therefore we need revamping programming of the "IPR Protection and Management Strategies in Higher Education" with regard management policy, institutional and IPR culture which is "comprehensive" and "systemic" using "structural" and "functional" approach.

Keywords: Protection of intellectual property rights, Intellectual property, Higher education, Creative economy of Indonesia.

1. Introduction

Indonesia has high potential of creativity¹, but does not have the ability to integrate it. It is therefore a step to identify the nation's identity as well as the potential of natural resources and human resources) is required by formulating constructive steps through the Creative Economy Blueprint of Indonesia involving all stakeholders, intensified initiatives (both private and government) to create places to develop the creative industry talent of local areas, and to create a culture-based products based on its priority.² It requires collaboration among the various actors that play a role in the creative industries, namely Scholars (Intellectuals), Business and the Government referred to as the 'triple helix' system³,

¹ Anonymous, *Creative Economy according to the Government, and Society*, art-skets.blogspot.com.

² Ibid.

³ Indonesian Working Group, Section of Power-Part Design, Department of Commerce, Part 2. *The Framework of Creative Economy Development, Indonesia Creative Economic Development Plan 2009-2015*, Indonesia Creative Development Plan towards Vision of 2030,

who are the main actors driving the birth of creativity, ideas, science and technology vital for the growth of the creative industries. Close relationships, mutual support and mutual symbiosis among the three actors in relation to the foundation and pillars of the creative industry models will generate strong and sustainable creative industries⁴.

In the context of the creative industries, scholars include archeologists, artists, clown-servants, gurus, educators in educational institutions, the pioneers in community, hermitage, culture and art galleries, individual or study group and researchers, authors, and other figures in fields of art, culture (values, philosophy) and science contribute greatly to the development of creative industries⁵.

College which is a place of higher education plays a major role in building, developing, and improving the quality of human resources in Indonesia. Colleges provide education which is an integral systemic, open, and multi-meaning in the process of empowering and developing a lifelong nation. Colleges build a model, willingness, creativity in the learning process, empower all components of society, enhance community participation, and create excellent public service with fast, precise, accurate services continuously fixed, non-discriminatory, sustainable, and affordable. Institutions of higher education are directed at improving the ability of research and development so that the results are disseminated and applied in society⁵. National education system of higher education held openly by a college education in the form of diploma, bachelor, master, specialist, and doctoral is a vehicle to develop quality, creative and innovative Indonesian human resources. Innovative traits pointed out by Ditkoff, M. cover the status quo challenge, curiosity, self-motivation, future insight, good-service delivery, risk takers, peripatetic and humorist⁶.

Globalization that runs very fast demands any university in order to be globally oriented, following the developments and changes that occur. University international conferences need to be attended as far as closely related to the educational programs. Indonusa Esa Unggul University as an example, although they were not present at the international conference of universities in Barcelona in 2003, they have learned and followed the conference agreement as far as it is in line with the grand design or blue print of Indonusa Esa Unggul University⁶ as an effort of improving their competitiveness.

High Education competitiveness is no longer determined by the abundance of natural resources and cheap labors, but rather is determined by technological innovation and the use of knowledge, or a combination of both⁷. The ability to produce, to select, to adapt, to commercialize and to use knowledge is critical to the sustainability of the acceleration of creative economic⁸ growth of Indonesia.

University of Science Malaysia (USM) Penang built the University in a garden, the Rector of USM develops technological innovation, social, and USM value with 8 C (commitment, concentration, capabilities, capacity, collaboration, commercialization, culture, and community), innovation (regular, niche, structural, and revolutionary) up to -user market and production technology, builds knowledge-based innovators, innovation with science principles, develops information and communication technology and techno-entrepreneurs, develops a k-economy (knowledge-driven economy), k-Collaboratory (knowledge, collaboration, and laboratory), organizational innovation as well as quality education and training⁹. Government, universities, and industry must come together to unite their potentials in a single network which is fair and equal to conduct research and development in an organized and systematic ways. Especially in the current era of globalization, Indonesia, like other developing countries, is faced with the challenge of the emergence of free competition in trade among nations. This free competition would lead Indonesia "invaded" by a wide range of new products and technologies from other countries.¹⁰

Development in universities is an effort to strengthen the competitiveness through the *Tridharma* synergy of Higher Education, as well as to improve the benefits and impacts of the results of research and development. In such case, DP2M continues to develop strategic excellent research programs in the development of science and technology which is one of the national interests.¹¹ *Tridharma* underpin the activities undertaken by a university, namely teaching, research and community services. The Activities using human intellectual will generate intellectual property products. College with the three pillars of the

Creative Economy Indonesia, Indonesian Creative Industries Study, Department of Commerce of Indonesian Republic, 2008, pp54, dgi-indonesia.com.

⁴ Ibid Taufiq Effendi, "The Role of Higher Education in Generating The State Apparatus Utilization" - Scientific Oration, Taufiq Effendi, Minister of State of The State Apparatus Utilization on Graduation Day, Post Graduate Program of Esa Unggul, Jakarta, 12 April 2006, esaunggul.ac.id

⁵ Ibid.

⁶ Ibid.

⁷ Leading Research of Universities and Industry, Higher Education (DIKTI) Research Guide 2012, edition: VIII, pdf, ipmm.uns.ac.id.

⁸ Ibid

⁹ Taufik Effendi, "The Role of Higher Education", opcit.

¹⁰ Leading Research of Universities and Industry, Research Guide, opcit.

¹¹ Ibid.

activities will certainly result in various types of intellectual property.

IPR system which is a system that is "universal" has great potential to be applied in the university environment. In line with the Higher Education Long Term Strategy (HELTS) the universities in Indonesia are then obliged to implement a new paradigm to improve the nation's competitiveness based on its competences. It is expected that the IPR system will be embedded in Tridharma college activities, in the areas of teaching, research, as well as community services in various stages of implementation, ranging from planning to evaluation stages.¹² Thus, the college humans, in this case students, researchers, teaching staff/lecturers, technicians, laboratory assistants and other employees in the conduct of academic activities should gradually and systematically turn into sharper orientation and have the benefit prospects of a higher quality for their competitiveness improvement.

Based on the background of the problem, the authors are keen to examine "the protection of intellectual property in universities as a means of competitiveness of universities and to examine the benefits of intellectual property protection in Higher Education through IPR as an effort to increase the acceleration of the creative economic growth of Indonesia."

2. Theoretical Foundation

This study used the Grand Theory that is the flow of natural law¹³ Grotius argued that the laws of nature generated through rational activity is a positive law that is a regulation to respect intellectual property rights¹⁴ the ownerships¹⁵ of which are to be recognized. According to John Locke¹⁶ that property rights is inherent rights in the individual's personality¹⁷. Every person has the right to defend his/her life with his/her work. Therefore, countries in order to provide special protection in accordance with the concept of "modern welfare state" must be active to improve their society welfare¹⁸, as the foundation of the work of intellectual property protection of universities in an effort to realize the acceleration of the creative economy of Indonesia.

The foundation of IPR protection of intellectual property as an effort to increase college competitiveness contained in "Middle Theory" that is a theory of property rights, contract theory, as well as other supporting theories, among others¹⁹; (1) Reward theory, namely the innovators or creators of intellectual property needs to be given awards and recognition and legal protection for the success of their efforts to bring forth creative and innovative products. (2) Recovery theory, namely the efforts of university intellectual property work needs to be protected for the benefit of the innovators or creators which is an attempt to improve university competitiveness, considering the innovators or creators have devoted their physical exertion, thoughts, time and cost. Therefore it is necessary to give them the exclusive right to exploit the IPR in order to regain what they have been devoted. (3) Incentive theory, saying that incentive should be given to stimulate creativity¹⁸. According to Robert M. Sherwood in Public Benefit Theory¹⁹ that intellectual property owners should be respected and protected by law in order to encourage their creativity to be the basis of creative economic growth acceleration governed by the laws that protect them for the creation of the three-actor synergy consisting of academicians, businesses and governments - in Indonesia known as ABG concept - or intellectuals, business, and the government or shortened as IBG²⁰. This is consistent with the opinion Etzkowitz & Leydersdorff in the Triple Helix Theory as a method of building an innovations -based policy shaping knowledge spaces, spaces where knowledge of the three actors already have an equivalent understanding and knowledge, which will direct the three actors to develop a consensus²¹. This is also in line with the opinion of Joseph Schumpeter who explained that these modifying factors are a Creative Destruction which means the emergence of new innovations in the industry will displace the old industries that are not creative and replace them with the creative ones.

¹² Leading Research of Universities and Industry, Research Guide, opcit.

¹³ See Theo Huijbers, *Philosophy of Law in History Flash*, Kanisius, Yogyakarta, 1982, p60

¹⁴ Eddy Damian, *Copyright Law According to International Conventions*, Copyright Act 1997, and their Protection Towards Books and Publishing Agreements, Alumni, Bandung, 1999, p17.

¹⁵ Ibid, pp27-28.

¹⁶ Djoko Kustono, *Industrial Design, Definition, Protection and Protection Application Procedures*, a paper, p.2, ivan_maurits.staff.gunadarma.ac.id.

¹⁷ Ibid.

¹⁸ Marbun and Mahfud, "Principles of State Administrative Law", Liberty, Jogjakarta, p 45.

¹⁹ Robert M. Sherwood, *Intellectual Property and Economic Development*: Westview Special Studies in Science, Technology and Public Policy. Westview Press Inc., San Francisco, 1990, at Ibid ps.11-13, at Nina Nurani "IPR Protection Over The Merchandise Works of Creative Industry To Improve Indonesia Economic Development", International Journal of Research in Management (IJRM), Issue 2, volume 2, March 2013, p 4. rspublication.com/ijrm/march/2012/1.pdf

²⁰ Part 2 In, *Development Framework Creative Economy*, loc.cit, pp 56.

²¹ Article 13 paragraph (2) of Law No.18 of 2002 on the National System of Research, Development And Application of Science and Technology.

3. Research Methods

Normative juridical and empirical research that is a study which refers to the legal norms contained in national and international legislations, as well as several law-related to intellectual property rights, the WTO-TRIPS Agreement, as well as Law Act. 18 year 2002 about the National System of Research, Development and Application of Science and Technology²² by searching, researching, and reviewing the object based on the literature data or secondary data, the results of research and other literatures.

While the empirical factor is the effective implementation of the provisions of the legislation effectively to achieve its objectives conducted at several universities in Indonesia and those in other countries.

The research specification used descriptive analysis to provide an overview of the facts with an accurate analysis of the legislation in force associated with legal theories and practices associated with the protection and benefits of intellectual property of universities through IPR as the competitiveness of the universities in efforts to accelerate economic growth. Research stage through library research and data announcement used document study. Data analysis used the data and drew conclusions from the findings. Both legal materials of primary and secondary data were analyzed with qualitative methods

4. Discussion

4.1. Intellectual Property Protection through IPR in Higher Education as Competitiveness of Higher Education

College is an intellectual activity-based institution²³, therefore the protection and management of intellectual property through IPR is an essential requirement that must be met²⁴. The three pillars of activity that is "Tridharma (Three responsibilities)" underlies the activities carried out by a university, namely teaching, research and community service that generate the intellectual properties and producing various types of intellectual properties²⁵ deserves adequate protection of IPR.

In line with the Higher Education Long Term Strategy (HELTS), Higher Educations in Indonesia are then obliged to implement a new paradigm to improve their competitiveness which is based on their competencies²⁶. This is in line with global trade paradigm leading to competition based on intellectual properties. Intellectual properties are valued as the most important asset in the competition, and Indonesia has ratified various international conventions in the field of intellectual property. With the ratification of the all parts of Indonesia are expected to have an obligation to do so, including elements of the college.

Thus the orientation of the college man, in this case students, researchers, teaching staff/lecturers, technicians, laboratory assistants and other employees in the conduct of their academic activities should gradually and systematically turned into sharper orientation and have the benefit of a higher quality prospects for their college competitiveness²⁷ improvement. Therefore HELTS issued by the Directorate General of Higher Education, Ministry of Education are expected to gradually and systematically to solve national problems through the role of Higher Education.

Compared to universities in developed countries, universities in developing countries, including those in Indonesia are faced with various problems, including lack of education and research costs, less "harmonious" relationship between industries and universities as one of the human resources and science and technology creators and the lack of infrastructure and mechanisms to ensure the smooth flow of information and the production of science and technology to their usage and also the opposite, from the needs of the market/industry to colleges²⁸. The IPR protection, when viewed comprehensively, is not limited only in the process or application for certificate of IPR protection, but it can be used also as one of the solutions to solve the problems faced by higher education today, including competitiveness.

Various colleges privilege when associated with status as a producer of intellectual property or science and technology, a very special case of an institution of higher education compared to departmental/non-departmental research and development institutions is the existence of students as "inputs" in the process of academic activities of a college. Students must follow the education/teaching, both theory and practice, and research, even doing community service activities which will result in a

²² Article 13 paragraph (2) of Law No.18 of 2002 on the *National System of Research, Development and Application of Science and Technology*.

²³ Djoko Kustono, *Industrial Design, Definition, Protection and Protection Application Procedures*, a paper, p.2, ivan_maurits.staff.gunadarma.ac.id.

²⁴ Ibid.

²⁵ Djoko Kustono, *Industrial Design, Definition, Protection and Protection Application Procedures*, op.cit.p.2

²⁶ Ibid.

²⁷ Krisnani Setyowati, *Intellectual Property Rights and Challenges of Implementation in Higher Education*. IPB Patent Offices. Office of Intellectual Property Rights Challenges and Implementation IPR, op.cit. IPB Patent Offices. Bogor, 2005, pp71.kms.ipb.ac.id.

²⁸ ibid

wide variety of intellectual properties. For example²⁹, papers/articles, products of lab-work activities, design/tool design, concepts and so on as good, creative, inventive and innovative works. The emerging problem is how the college can create a system that is conducive in order to encourage students to engage in activities that produce high quality works. It requires the protection of intellectual property through the IPR system. It requires the State's role in providing special protection in accordance with the modern concept of the welfare state. Marbun said that in the "welfare state" government must be active to ensure the welfare of its society³⁰.

"The mindset of appreciation" (The Respectful)³¹, that is able to appreciate the work of others, is the main essence of the IPR system in addition to "creative mindset" (The Creating Mind)³². The mindset can lead to motivation and encouragement to continue to create and innovate in the field of copyright products and production technology, as well as other intellectual property products.³³ This is consistent with the opinion of Robert M. Sherwood in the "Reward Theory"³⁴ saying that to the owner of the intellectual work should be given awards, recognition and legal protection as a key to success to encourage people to create. Therefore, the product of the intellectual property needs to be registered to obtain legal certainty.

Basic conception of intellectual property rights (IPR) derived from the proposition postulated by John Locke³⁵. The core idea of the proposition is to put property rights as inherent rights in the personality of the individual,³⁶ every has the right to defend life with his/her work.

At this time Indonesia has the legislation in the field of IPR for the protection of intellectual property owners and not contrary to the provisions as required under the TRIPS Agreement. Legislation referred to include³⁷: physical, ideas, creativity and its derivatives.

If one combines the work of his humanity, the natural objects and adds something of himself, then automatically the result is part of his fortune, and cannot be removed from him/her without his/her permission. This is consistent with the theory of property rights and contract theory. Therefore, all human beings have certain natural rights and to enjoy these rights do not require permission from the government³⁸. Intellectual property as a natural right¹ and it should be protected as part of the natural right bestowed by God to man. This is in line with the flow of "natural law".³⁹ Grotius argued that the laws of nature are generated through rational activity that is a positive law meaning that respecting intellectual property rights⁴⁰ is to recognize its ownership⁴¹.

Thus intellectual property rights can be categorized into universal values that must be respected by humans as subjects of the law. Based on the description above, the results of university research are property rights inherent to their inventors that have to be protected with some rights include⁴²:

1. The Law No.19 Year 2002 about Copyright
2. The Law No. 29 Year 2000 about the Protection of Plant Varieties
3. The Law No. 30 Year 2000 about the Trade Secrets
4. The Law No.31 Year 2000 about Industrial Design
5. The Law No. 32 Year 2000 about Layout Designs of Integrated Circuits;
6. The Law No. 14 Year 2001 about Patents (Patents Act); and

²⁹ *ibid*

³⁰ Marbun and Mahfud, "Principles of State Administrative Law", Liberty, Jogjakarta, p45.

³¹ Part I: *Introduction and Development Direction of Creative Economic of Indonesia 2015 on Creative Economic Development Plan of Indonesia 2009-2015*, Study of Indonesia 's Creative Industry, Ministry of Trade, Indonesian Republic, 2008, p3.

³² *Ibid*.

³³ *Government Policy on IPR Protection and Professional Services Trade Liberalization in The Field of Law*, Director General of Small and Medium Industries, Ministry of Industry, Jakarta, 2007, p1 http://www.saupdf.org/doc_19692/

³⁴ Robert M. Sherwood in "Reward Theory" in Nina Nurani, "IPR (Intellectual Property Rights) Protection on Works of Industrial Design Creativity for MSM Industry as an Effort to Improve National Competitiveness in Free Trade" *Journal Global Business and Economics*, Vol 8 No. 1 January 2014, p 86.

³⁵ Djoko Kustono, *Industrial Design*, Definition, op.cit p2

³⁶ *Ibid*.

³⁷ Government Policy in IPR Protection, op.cit.

³⁸ *ibid*

³⁹ See Theo Huijbers, *Philosophy of Law on History Flash*, Kanisius, Yogyakarta, 1982, pp60 in Nina Nurani "The Implementation of TRIPS-WTO in the Protection of IPR over Fashion Trademark of Creative Industry as an Effort to Improve the Global Competitiveness". *International Journal of Trade, Economics and Finance (IJTEF)*, Vol. 5, No.3, June 2014. www.ijtef.org/papers/385-F620.pdf

⁴⁰ Eddy Damian, *Copyright Law according to International Conventions, Copyright Act 1997*, and their Protection towards Books and Publishing Agreements, Alumni, Bandung, 1999.P. 17

⁴¹ *Ibid*, pp27-28.

⁴² Nina Nurani, *Protection and Utilization of "Intellectual Property Right through Universitas A Strategy to Create Business Opportunities"*, National Seminar on Knowledge Management and Competitive Value Key Success Factors in Business, Universitas Widyatama, Bandung. August 5 to 7, 2006. pp264-265. repositori.widyatama.ac.id/xmlui/handle/123456789/3086.

7. The Law No. 15 Year 2001 about Brand

By implementing IPR protection system in accordance with the comprehensive reference and correctly, there are enormous opportunities for students or in this case colleges where they study to produce works of high quality and highly competitive, as expected by all stakeholders.⁴³ The number of intellectual properties generated by colleges are not only associated with the academic activities of the students, but also of their lecturers/teaching staff/ researchers. Tridharma activities hitherto attached to each individual lecturer enrich the college as a producer of intellectual property among other works: modules/handouts/ lab-guide books/ textbooks, model software/simulations, policy patterns/plans/strategies, equipment prototype, increase in the value-added of free counseling and services, visual aids for public, models/simulations, business tips for small and medium businesses, development of communication media and the works of other intellectual property.⁴⁴

Thus the privilege of a higher education institution is as a "routine" producer of intellectual property. Selection on the quality of student candidates which is strict will also increase the opportunities to produce good works. But it needs to be backed up with a quality education system and to have a high relevance as well, eg curriculum, teaching staff, facilities and so on⁴⁵ that are the means of higher education competitiveness. The diversity of types of intellectual properties produced is very high, with a variety of educational programs in the college, ranging from Diploma, Fresh Graduate and Post Graduate.

Thus the college as an educational institution and the development of science and technology (IPTEK) as well as art and literature must be able to produce various kinds of "products" that have the potential for IPR, moreover if the university has a target of "Research University"⁴⁶. One of the efforts is by registering their works into an intellectual property right registered so that the ownership and management are protected by law, the potential to improve university performance indicators⁴⁷ of competitiveness of the university in the world. Intellectual work that has innovation and creativity produced by a university has a very large benefit to the advancement of the university and the wider community and has a potential to realize creative industries that have global competitiveness.

The current condition of intellectual works produced by the academic society, especially the works of the students registered at the Directorate General of Intellectual Property Rights (Ministry of Justice and Human Rights) are still very minimal. Similarly, the types of IPR registered are still limited to "patent" and "copyright"⁴⁸ and at UII are copyrights and brands⁴⁹. According to the data on IPR application at the IPR Center of Law Faculty of UII during four years from 2010 to 2013, the number of IPR applications was as follows: Copyrights 9 (nine), brands 35 (thirty five), patent rights 2 (two), trade secret rights 3 (three), industrial designs 2 (two), geographical indications 2 (two). The total of all rights handled was 73 rights⁵⁰. It was not comparable to the number of university graduates each year⁵¹. This is an obstacle in efforts to achieve increased competitiveness of Higher Education.

These constraints can be identified as follows⁵¹: first the low level of knowledge in the university academic community members about IPR. IPR is a concept born from the understanding of individualistic, while the condition of Indonesian society which is understood is the concept of communalists. The second, the understanding of IPR for some colleges is only synonymous with registration. The IPR management context is poorly understood that it actually must be followed by utilizing the right benefits. The third is the weak regulation in the field of protection and management of intellectual property rights in the Higher Education. Currently, colleges have not concerned about it, causing the IPR awareness efforts at universities to be very weak.

The management of IPRs already registered which is to be protected and utilized by universities as a means of competitiveness requires a strategy in order to provide services over the promotion and commercialization of university assets of the results of research and development activities which are the creation of new entrepreneurs, in addition to a framework of research quality improvement and

⁴³ Krisnani Setyowati, *Intellectual Property Rights and Challenges of Implementation in Higher Education*.op.cit p.73

⁴⁴ ibid

⁴⁵ ibid

⁴⁶ Nina Nurani, *Protection of Intellectual Property Right on Work of Fashion Trademark of Creative Industry as an Effort to Improve Global Competitiveness, Scientific Oratation on Graduation Day, Phase II-Academic Year 2013/2014 Widyatama University, Bandung March 1, 2014*

⁴⁷ ibid

⁴⁸ Degree of Science of Universitas Indonesia -Talk Show-Workshop-Industry Meeting, Universitas Indonesia, <http://siyanki.ui.ac.id/content/gelar-ilmu-universitas-talk-show-workshop-temu-industri>. 24 September 2012 in Ibid

⁴⁹ Anonymous, *Intellectual Property Rights*, Center of Law Faculty UII – Strategic Plan, Central hki.uii.ac.id

⁵⁰ Budi Agus Riswandi, Executive Director of the IPR Center "*Managing Intellectual Property and Intellectual Property Rights in Higher Education*", Faculty of Law, Universitas Islam Indonesia, Yogyakarta and Member Arbitration and Mediation of Intellectual Property Rights (IPR BAM) Jakarta, dppm.uii.ac.id.

⁵¹ ibid

competitiveness in terms of *caturdharma* of the college that can be a strategy and framework and the university performance, among others, to contribute greatly towards Accreditation Standards⁵².

Hence IPR management includes not only the application process/registration of intellectual property generated to the Directorate General of Intellectual Property Rights, Ministry of Justice and Human Rights to obtain a certificate, but also includes the process of socialization in order to foster the motivation to be creative, inventive and innovate, as well as the process of determining the IPR management strategies in the plan of College tridharma activities.⁵³

Therefore, it is necessary to improve the knowledge of the university academic community on a more systemic IPR. Currently, in practice, it still relies on the role played by government agencies and private which is less systemic,⁵⁴ eg in the preparation of work plans together on a research-assessment process towards the results of college Tridharma activities, the process of preparing a data base of intellectual property as the results of Tridharma activities, the process of protection which is based on IPR systems, the process of utilization, including the determination of the amount of remuneration and distribution as well as the regulatory process. Socialization activities are intended to foster awareness of the faculty/researchers and students.

Socialization still must be done, but with the increase in substance within the scope of IPR management. Related parties should start thinking of ways or mechanisms that can effectively reach the target accurately⁵⁵. The assessment process needs to be done to assess the feasibility of the intellectual property produced, especially those that will be used commercially. Intellectual property management / IPR requires significant investment, so it needs to be assessed the eligibility to be protected, commercialized and applied before entering the stage of application for protection.

IPR protection system will only import a benefit to the college as the college competitiveness if implemented comprehensively since the determination of the strategy⁵⁶. For example one of the Tridharma college activities, namely research, in determining the research strategy is no longer based on the tastes of the individual or group, but based on targets or specific benchmarks. The number of patents or other intellectual property rights has become a kind of benchmark in assessing the success of a college in utilizing research funding and other resources as it has been used in developed countries.

4.2. The Benefits of Intellectual Property Protection in Higher Education through IPR as an Effort to Increase the Acceleration of Creative Economic Growth of Indonesia

Creative economy is believed to be able to answer the challenge of the basic problems of short and medium terms considering⁵⁷: (1) relatively low post-crisis economic growth (an average of only 4.5% per year); (2) the still high unemployment (9-10%), high levels of poverty (16-17%), and (4) the low competitiveness of the industry in Indonesia. In Indonesia, the role of creative industries in Indonesia's economic growth is significant with a contribution to GDP on average in 2002-2006 was 6.3%, equivalent to 104.6 trillion rupiah (nominal value) and 152.5 trillion rupiah (nominal value). The industry has been able to absorb the labor force on average in 2002-2006 was 5.4 million with a participation rate of 5.8%.

It requires Indonesia human resource to have disciplinary mindset (The Disciplinary Mind), the mindset which is learned in school besides the mindset creations (The Creating Mind), the ability to express and to find the answer to a problem or phenomenon encountered. In a business context, the two abilities are able to move companies to be more pro-active, not just following the trend, but setting a trend⁵⁸.

Related to this, nowadays it is increasingly recognized that university curriculum that has an impact on students' power to struggle is a creative work to solve any problems, and to develop entrepreneurial spirit. The creativity meant here according to Howkins is to sharpen sensitivity and readiness to be proactive in the face of changes in the real environment⁵⁹ leading to the birth of innovation.⁵⁹ According to Tether the contribution of creativity to the business performance, by creating a creative climate or creative culture, will increase innovation and creative performance such as Research & Development and design⁶⁰.

⁵² ibid

⁵³ NinaNurani, *Protection of Intellectual Property Right on Work of Fashion T, Scientific Orationon Graduation Day. op.cit.*

⁵⁴ ibid

⁵⁵ Budi Agus Riswandi, Executive Director of the IPR Center "*Managing Intellectual Property, op.cit.*

⁵⁶ ibid

⁵⁷ Part I.: *Introduction and Creative Economic Development Direction of Indonesia 2015*, loc.cit. p3.

⁵⁸ *Creative Economic Development*, p 27.

⁵⁹ John Howkins. (2005). *Asia-Pacific Creative Communities: A strategy for the 21st Century Senior Expert Symposium Jodhpur, India, 22-26 February 2005* in Part II. *The Framework of Creative Economic Economy. Indonesia Creative Economic Development Plan 2009-2015*, p57.

⁶⁰ ibid

Regarding the fact, the university as an educational institution should lead to a system of education that is able to create⁶¹ (1) competitive competence which requires practice, experimentation, research and development, and multidisciplinary collaboration project consisting of a variety of knowledge of science, technology, and art; (2) Multi-Dimensional intelligence which includes the rational intelligence (IQ) emotional intelligence (EQ) and spiritual intelligence (SQ). Thus formal education is expected to generate human resources with high-rational intelligence and have high-creative ability.

Related to innovation-based economic development method, Etzkowitz & Leydersdorff in the Triple Helix theory revealed that the importance of creating the synergy of three poles, namely academicians, businesses and government in Indonesia is known as the concept of ABG⁶². In line with this theory, the sustainable economic development must be based on science with synergy-download it on the innovation (knowledge capital)⁶³. Triple Helix as the main actor should form a consensus space⁶⁴, which can be packed into IPR-based creative products with economic values, as efforts to accelerate the creative economic growth of Indonesia. This is in line with the opinion of Robert M. Sherwood on "Public Benefit Theory" explaining that the creators deserve legal protection of their creations as a means to support economic development.⁶⁵

Currently the problems in the use of IPR in universities as academic institutions in efforts to achieve the creative economic growth acceleration are, the first, the "mind set" of the academic community about the understanding of the IPR concept is considered something new; the second, in general universities do not have a strategy to protect and to manage the intellectual property rights. Meanwhile the benefits of managing IP/IPR for higher education include among others⁶⁶: creating advantages and competitiveness with other universities; in addition to an added value for the improvement of the economic benefits of management activity of IP/IPR and enhancing the competence and professionalism of the academic society in the field of science explored primarily developing new entrepreneurs.

Therefore, it is necessary to develop "Strategic Intellectual Property Rights Protection and Management in Higher Education" by considering three aspects include⁶⁶⁷: (1) the management of Intellectual Property Policy (IP)/Intellectual Property Rights (IPR), namely the availability of various internal policies that support the management of IP/ IPR, among others, the rules concerning the management of IP/IPR in universities can be a strategy and framework and college performance (2) institutional IP/IPR, namely the availability of a strong institution supported by competent and professional human resources, as well as an adequate budget, among others, the establishment of IPR center in university environment; and (3) IP/IPR culture, the familiarity of campus community to manage IP/IPR through the available system, including documentation and registration processes which are operating effectively.

This is consistent with the provisions of Article 13, paragraph 2 in conjunction paragraph 3 of Law no. 18 of 2002 on the National System of Research, Development and Application of Science and Technology⁶⁸. Article 13, paragraph 2 has been arranged that:

"Higher education and R & D institutions are required to commercialize the result dissemination of research and development activities as well as intellectual property owned as far as not reducing the interest of the intellectual property protection".

And Article 13 paragraph (3) provides that: "To improve the management of intellectual property, universities and R & D institutions shall make efforts to establish IPR center in accordance with their capacity and ability".

Each of intellectual property and the results of research, development, engineering and innovation funded by the government and/or local government shall be managed and utilized by universities, R & D institutions and enterprises that implement them. This can be done by identifying a number of problems associated with it, among others⁶⁹:

⁶¹ Part I : *Introduction and Both Creative Economic Development of Indonesia* 2015, loc.cit. p3

⁶² Part 2: *The Frame Work of Creative Economic Development*, loc.cit. pp61.

⁶³ ibid

⁶⁴ ibid

⁶⁵ Nina Nurani, "IPR (Intellectual Property Rights) Protection Over The Mercchandise Works of Creative Industry To Improve Indonesia Economic Development", p.7.

⁶⁶ Budi Agus Riswandi, *Executive Director of the IPR Center "Managing Intellectual Property and Intellectual Property Rights in Higher Education*.op.cit.

⁶⁷ ibid

⁶⁸ Article 13 paragraph (2) of Law No.18 Year 2002 on the National System of Research, Development and Application of Science and Technology.

⁶⁹ Intellectual Property Rights Center of the Law Faculty, UII-startegic-Plan, hki.uui.ac.idCenter.

- a. The lack of information and data relating to the ownership of IPR in Higher Education. This is due to universities which do not have a good plan of database system for IPR assets. The usefulness of the information and data is a means to realize the protection and management of Intellectual Property Rights in Higher Education.
- b. There is no effective monitoring system in Higher Education. Currently universities do not have systemic pattern of IPR supervision. As a result, holders of intellectual property rights are very weak and limited in their intellectual property rights supervision. It is time for the Higher Education to proactively prepare the IPR system monitoring to provide benefits to the owners/holders of the rights, academic community, and the public at large.
- c. The low level of utilization of IPR in universities in order to improve learning and to increase the university revenues. It is separated from the university's attention.

Considering these problems, it is necessary to arrange a programming done in a "comprehensive" and "systemic" approach using two approaches that are "structural" and "functional" as follows⁷⁰:

- a. Structural Approach with emphasis on the establishment of an institutional system through the university institutional structure (top down), namely Rector, Deans, and other leaders with a number of powers that can be used to strengthen IPR protection and management system.
- b. Functional Approach by focusing on IPR awareness efforts by community members in the academic university environment. It became an effective instrument in improving "generate income" learning of universities (bottom up). It needs to be accompanied by a high awareness of intellectual property rights. It has significance in an effort to make the protection and management, and utilization of intellectual property rights as a supporting power to realize the increase of creative industry works.

As a follow-up of programming using the two approaches mentioned above, it is necessary to plan efforts to establish a system of protection and management of Intellectual Property Rights in Higher Education. This can be done through the implementation of several programs were based on the three main "domains", namely⁷¹:

- a. Formation of IPR awareness for university culture characterized by the birth of IPR (Intellectual Property Right) Culture.
- b. Formation of IPR protection system for strong universities, accessible, and guarantees legal protection through the regulations of development and management of IPR protection. In addition it requires the formation of an alternative system of IPR protection through a system of "data base" as well as the establishment of surveillance systems of IPR in universities with a system of "networking".
- c. Establishment of IPR utilization system in universities within the framework of "income generate" by using "innovative and creative learning models."

Related to the "generate income" as an effort of university's competitiveness in its implementation in order to improve the acceleration of the creative economy in line with the *Recovery theory*⁷², protection should be given by registering to obtain a certificate or granted⁷³ so that the exclusive rights can be utilized, both economic rights and moral rights for the duration of effective protection in order to regain what has been expensed regarding the innovators or creators have given their physical exertion, thoughts, time and cost. Thus the students and researchers/teaching staff are motivated to creatively result in inventive and innovative works. Therefore the use of IPR can be done commercially and non-commercially.

Utilization of IPR which is a non-commercial is the usage aimed at the development of technology, community development, or other activities. As for the commercial activities it can be done through licensing, sales, new ventures, joint ventures, acquisitions and strategic alliances. It will be a financial benefit which is the main goal. IPR provides a limited monopoly for IPR holders that IPR is a business instrument over the intellectual properties that it protects,⁷⁴ therefore what need to be embedded in the

⁷⁰ ibid

⁷¹ ibid

⁷² NinaNurani, "Protection and Utilization of "Intellectual Property Right through University as A Strategy to Create Business Opportunities", National Seminar on Knowledge Management, Knowledge Management and Competitive. Op.cit. p 263.

⁷³ Krisnani Setyowati, *Intellectual Property Rights and the Implementati on Challenges*, op.cit. pp85.

⁷⁴ ibid

academic community are no longer limited to the spirit of entrepreneurship, but also the technopreneurship. This is also in line with the incentive theory⁷⁵.

According to the data in developed countries, where the IPR system is well established and is conducive to implementing IPR system correctly, of about 100 research results only about 7-10% are successfully commercialized and to date in Indonesia there are almost close to the number of 100 (one hundred) IPR center that can be documented by the Ministry of Research and Technology. This number includes the IPR Center in the department of research and development institutions/non-departmental. But those that really actively perform their function are still minimal. IPR Center is indispensable, especially if we consider the lack of knowledge, understanding, and public awareness of IPR systems, in addition to the embryo of the Technology Licensing Office/Technology Transfer Office/Innovation Center located abroad.

Thus the challenge for IPR system to always consistently inserts the IPR system into one of the three responsibilities (tridharma) requires serious efforts, given the general level of awareness and understanding of the IPR system is still low while the demands of globalization as well as the commitment of the Indonesian nation at the international level does not allow the Indonesian nation backward or decrease the intensity of efforts we have to do as a means of university competitiveness.

5. Conclusions and Recommendations

5.1. Conclusions

- a. Intellectual Property in Universities has the benefit of a more qualified prospect in order to improve the competitiveness of universities. It requires the existence of IPR protection through IPR system as a form of respect in order to grow the motivation to create and to innovate. Therefore it is necessary to do registration that can potentially improve the performance indicators of Higher Education. Currently the number of intellectual works produced by academic community, particularly by students, is still very minimal. Similarly, the types of IPR that are registered are still limited to the right brands, copyrights and patents.
- b. The utilization of the academic community through the intellectual property protection of IPR systems in universities in efforts to achieve the acceleration of creative economic growth with a "triple helix" system (Business-Government and Intellectuals) faces some problems, such as the "mind set" of the academic community on the understanding of the IPR concept other than higher education in general does not yet have a strategy for the proper and comprehensive protection and management of IPR.

5.2. Recommendations

- a. In addition the registration, the IPR system in colleges should be used as a solution to the problem of lack of education and research fund, lack of harmonious relationship between universities and industries and the lack of infrastructure and mechanisms to ensure information up to its utilization.
- b. "IPR Protection and Management Strategies in Higher Education" should be arranged with regard to IPR management policies, IPR institution, among others, the establishment of IPR center in the university environment and IPR culture. It is with regard to the identification of a good database system planning for IPR assets, effective monitoring system of IPR in Higher Education and increased IPR usage in order to improve learning and increased university revenue. The approach used should be structural and functional with the program implementation at the domains developing IPR awareness, IPR protection formation, and IPR utilization systems.

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⁷⁵ Nina Nurani, *Protection and Utilization of Intellectual Property Right through University as A Strategy*, p.263.

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