

Legal rules on patent exploitation and management for innovation in Vietnamese universities

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Abstract: According to the World Intellectual Property Organization (WIPO), universities are the cradles of creating new knowledge and technology, therefore, the management and exploitation of patent in higher education institutions plays a very important role in today's new context. Managing and exploiting patent brings many important benefits to lecturers, students, graduate students and scientists. It helps protect ideas and research from misappropriation, creates opportunities for commercialization and income from intellectual property rights protection, promotes collaboration and technology transfer, and enhances the university's reputation and brand. This article will help increase the university understanding and awareness of the importance of the governance and exploitation of patent as well as propose specific measures to help strengthen governance and exploitation activities.

Keywords: *Intellectual Property, Patent exploitation and management, University.*

1. Introduction

The management and exploitation of intellectual property (IP) assets in general and of patent in particular are not only urgent but also highly relevant in the current context.

First and foremost, the urgency of this matter is evident as innovation is considered one of the top priorities of Vietnam. In practice, effectively managing and leveraging patent generated from research and teaching activities in universities is a key driver to foster innovation, thereby enhancing national competitiveness.

In addition, the relevance of this issue cannot be overlooked in the context of deep international integration today. Patent is increasingly valued and has become a crucial factor in attracting both domestic and foreign investment. Therefore, managing and exploiting patent effectively is a way to demonstrate the capability to align with the trends of a knowledge-based economy and meet international IP requirements.

Notably, as the core centers for research and knowledge creation in the country, universities play an undeniably important role in this regard. Systematic management and exploitation of patent will act as a catalyst for technology transfer activities, increasing the economic value of these invaluable intellectual assets.

However, in Vietnam, the field of IP faces numerous challenges in the processes of rights establishment, commercialization, and protection. Recent statistics reveal significant difficulties that organizations, especially universities, are encountering. According to the Intellectual Property Office of Vietnam, although the number of patent and utility solution applications from universities surged to 192 and 155 in 2023, only 50 patents and 84 utility solution certificates were granted¹. These figures indicate that the process of establishing intellectual property rights remains challenging.

Additionally, a study by Ho Chi Minh City University of Industry revealed that during the period of

¹ National Office of Intellectual Property of Vietnam, *Annual Report of Intellectual Property Activities in 2023*, at the website https://ipvietnam.gov.vn/web/guest/bao-cao-hang-nam/-/asset_publisher/vTLYJq8Ak7Gm/content/so-lieu-thong-ke-phuc-vu-bao-cao-thuong-nien-hoat-ong-so-huu-tri-tue-nam-2023

2011–2016, 12 public technical universities executed 3,992 contracts for technology transfer and commercialization of research results, with a total value of 895.875 billion VND². However, revenue from these activities accounted for only 2% to 5% of the universities' total income, highlighting significant limitations in commercialization efforts.

These statistics reflect the practical difficulties in establishing intellectual property rights and the underutilized potential of research commercialization in Vietnam. This situation demands significant efforts and policy reforms to create a more favorable environment for IP development.

To clarify the legal framework governing the management and exploitation of IP assets in general and of patent in particular at universities, the authors will adopt an analytical research method, examining current regulations while assessing their limitations and shortcomings to evaluate their feasibility of new relevant solutions.

Firstly, the paper will conduct a thorough analysis of relevant legal documents, including the Civil Code, the Law on Intellectual Property, the Law on Higher Education, the Law on Technology Transfer, and the Law on Science and Technology. Reviewing and analyzing these documents will help identify the full scope of existing legal provisions regarding the establishment of intellectual property rights in higher education institutions.

Next, the authors will comprehensively evaluate the relevance, effectiveness, and consistency of these legal provisions in managing and exploiting patent for innovation in universities. This is a crucial step to pinpoint specific shortcomings and gaps that require attention.

Finally, based on the analysis and evaluation, the authors will propose solutions to improve the legal framework, aiming to enhance the effectiveness of managing and exploiting patent, as well as establishing, enforcing, and safeguarding intellectual property rights within higher education institutions. Policy recommendations and practical guidelines will also be suggested to support universities in effectively protecting and leveraging their IP assets.

This study will make practical contributions by refining the legal framework and strengthening patent management capacity in Vietnamese higher education institutions.

Additionally, the authors will provide an overview of existing research by summarizing a representative study to offer a comprehensive perspective on this topic.

2. Literature Review

In the book *Universities and Intellectual Property: Ownership and Exploitation*, authors A. Monotti and S. Ricketson delve into the issue of intellectual property (IP) generated by faculty members, researchers, and the role of universities in commercializing such assets. The authors emphasize the need for policies that balance the interests of universities, faculty, students, and businesses while safeguarding academic freedom. Additionally, the book highlights the legal context of IP in higher education and the impact of legal regulations on innovation and knowledge transfer³.

In their study *Governance of Intellectual Property and Knowledge Creation in UK Universities*, Andersen and Rossi examined two key issues: the extent to which patents, compared to other forms of IP, promote the circulation of knowledge and contribute to the knowledge creation process in universities, and whether universities perceive the market for patents and copyrights as efficient.⁴

The two authors also published a research paper titled *Governance of Intellectual Property and the Pursuit of Economic Interests in UK Universities*. This study explored how UK universities manage and utilize IP rights to generate economic benefits. It aimed to gain deeper insights into how universities conduct IP-related activities to achieve profitability⁵.

² Phan Hong Hi, Commercialization of science research projects at public technical universities in Vietnam [*Thương mại hoá kết quả đề tài nghiên cứu khoa học ở các trường đại học công lập khối kỹ thuật ở Việt Nam*], Journal of Industry and Commerce, (2023), <https://tapchicongthuong.vn/thuong-mai-hoa-ket-qua-de-tai-nghien-cuu-khoa-hoc-o-cac-truong-dai-hoc-cong-lap-khoi-ky-thuat-o-viet-nam-111615.htm>

³ Monotti, Ann And Sam Ricketson, (2008), *University and intellectual property: ownership and exploitation*, Oxford University Press.

⁴ Andersen, B., & Rossi, F., (2011), Intellectual property governance and knowledge creation in UK universities. *Economics of Innovation and New Technology*, 20(8), 701-725

⁵ Andersen, B., & Rossi, F., Intellectual property governance and the pursuit of economic rewards in UK universities, *Strategic Change: Briefings in Entrepreneurial Finance*, 19(5-6), 239-258 (2010)

Robert James Crammond, in his study *Developing Intellectual Property Management Skills and Entrepreneurship in Universities: An Educator's Perspective*, proposed solutions for enhancing entrepreneurship capabilities in higher education institutions through IP education. The paper highlights the importance of integrating IP management into teaching to foster innovation and support startups. Furthermore, it underscores the need for collaboration among educational institutions, policymakers, and the business community to address knowledge gaps in IP. Ultimately, the study aims to help students leverage IP management and utilization skills to succeed in entrepreneurship⁶.

In Vietnam, there have been a few notable studies on this topic. For instance, *Scientific Research and Technology Transfer at Can Tho University of Technology and Engineering* by Nguyen Minh Tan and Nguyen Thi Yen Nhi evaluates the current state of scientific research and technology transfer activities conducted by faculty members at Can Tho University of Technology and Engineering. The analysis of the 2019–2021 period shows that scientific research and technology transfer activities occurred frequently, producing a variety of outputs, such as articles published in domestic and international journals, and research projects at the institutional, district, and city levels. Moreover, the school's technology transfer activities showed positive changes during these three years⁷.

Similarly, Phan Hong Hai's paper *Commercialization of Research Outputs in Public Technical Universities in Vietnam* assessed the forms, current state, policies, and outcomes of research commercialization in public technical universities in Vietnam. The study identified the advantages and challenges of translating research outputs into practical applications⁸.

While there have been several articles on commercialization and IP management in general, as well as in the context of enterprises and higher education institutions, this paper aims to provide a more comprehensive and updated analysis of patent management and exploitation in universities.

3. Results and Discussions

3.1. The Definition of Patent

There is no specific legal definition of the concept of intellectual property in the Intellectual Property Law 2005 (amended and supplemented in 2022) of Vietnam as well as many countries around the world. Countries with developed intellectual property legal systems such as the US, UK or Australia also do not provide a specific definition of intellectual property.

However, according to World Intellectual Property Organization (WIPO): "Intellectual property (IP) refers to creations of the mind, such as inventions; literary and artistic works; designs; and symbols, names and images used in commerce. IP is protected in law by, for example, patents, copyright and trademarks, which enable people to earn recognition or financial benefit from what they invent or create. By striking the right balance between the interests of innovators and the wider public interest, the IP system aims to foster an environment in which creativity and innovation can flourish."⁹

A patent is the certificate delivered to the owner of patented invention. According to Clause 12, Article 4 of the Law on Intellectual Property 2022, an invention is defined as a technical solution in the form of a product or process designed to solve a specific problem by applying natural laws.

4. Concept of Patent Exploitation and Management

"Intellectual property management includes activities aimed at forming, developing and exploiting intellectual property; Preservation, protection and development the value of intellectual property;

Crammond, R.J., *Developing intellectual property and the entrepreneurial university element: an educator perspective*, International Journal of Intellectual Property Management, 14(4), 389–409 (2024)

Nguyễn Minh Tân, Nguyễn Thị Yến Nhi, *Nghiên cứu khoa học và chuyển giao công nghệ tại Trường Đại học Kỹ thuật - Công nghệ Cần Thơ*. Tạp chí Phát triển và Hội nhập (2023)

⁸ Phan Hồng Hải, *Thương mại hoá kết quả đề tài nghiên cứu khoa học ở các trường đại học công lập khối kỹ thuật ở Việt Nam*. Tạp chí Công Thương (2023), <https://tapchicongthuong.vn/thuong-mai-hoa-ket-qua-de-tai-nghien-cuu-khoa-hoc-o-cac-truong-dai-hoc-cong-lap-khoi-ky-thuat-o-viet-nam-111615.htm>

⁹ *What is Intellectual Property (IP)?* (n.d.-b). Retrieved 24 April 2024 from [https://www.wipo.int/about-ip/en/#:~:text=Intellectual%20property%20\(IP\)%20refers%20to,and%20images%20used%20in%20commerce](https://www.wipo.int/about-ip/en/#:~:text=Intellectual%20property%20(IP)%20refers%20to,and%20images%20used%20in%20commerce).

Management and use of revenue from commercial exploitation of intellectual property”¹⁰. Moreover, IP exploitation and development involve implementing a structured program to identify, enhance and utilize intellectual property rights to their fullest potential. Development encompasses many different aspects including technological, managerial and commercial considerations, aimed at evaluating, protecting and effectively using ideas, innovations, products, processes and information monopolies across different sectors, regardless of the specific context of the organization¹¹. Based on this concept, the patent exploitation and management could be defined as the activities aimed at forming, developing and exploiting patent; Preservation, protection and development of patent; Management and use of revenue from commercial exploitation of patent.

4.1. Importance of Patent Exploitation and Management at Vietnamese Universities

The creation and administration of IP in general and patent in particular in universities and colleges are essential to fostering innovation, accelerating economic expansion, and improving society at large. Universities are hubs for innovative studies and discoveries in a variety of disciplines, including the arts, humanities, and science and technology. It is essential to turn these concepts and inventions into actual assets through intellectual property rights protection in order to guarantee that the work of academics, researchers, and students is acknowledged, promoted, and commercialized effectively. Universities can benefit from the outcomes of their research by licensing patents, copyrights, and trademarks to business partners through effective intellectual property management, which makes it easier for academics to transfer technology and information from the educational environment to the marketplace. Universities benefit financially from this industry-university partnership, which also fosters the creation of new goods, services, and technology that solve societal issues and unmet demands. Furthermore, strong IP management systems enable academic institutions to protect their exclusive knowledge, stop unlawful use or infringement, and keep a competitive edge in the global knowledge economy. Universities can also encourage students and researchers to explore new ideas, take chances, and pursue creative undertakings by encouraging a culture of innovation and entrepreneurship, knowing that their intellectual contributions will be acknowledged and valued.

5. Legal Framework Governing Patent Management and Exploitation Activities

Regarding the patent management and exploitation, there are many legal documents regulating this issue. First of all, there are Conventions and Agreements including: Agreement on Trade-Related Aspect of Intellectual Property Rights (TRIPS Agreement), Paris Convention for the Protection of Industrial Property, The Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP), European Union-Vietnam Free Trade Agreement (EVFTA).

In addition, Vietnam also regulates the patent management and exploitation at universities in a number of legal documents including: Intellectual Property Law; Law on Technology Transfer; Law on Science and Technology; Higher Education Law; Decree 26/2021/TT-BGDĐT regulates scientific research activities of students in higher education institutions; Decree 109/2022/ND-CP regulates science and technology activities in higher education institutions; Decision approving the intellectual property development program until 2030.

Furthermore, the authors also want to mention and analyze some legal documents of countries with developed intellectual property legal systems such as the USA, China, and Japan. Specifically, in Japan, there is the Intellectual Property Basic Act of 2002; National University Corporation Act 2003 and Guidelines of the Ministry of Education, Culture, Sports, Science and Technology on intellectual property policies at universities. In the USA, the issue of patent management and exploitation was regulated in Bayh-Dole Act of 1980. In China, an extremely developed country in terms of IP, there are also a number of legal documents regulating this issue such as: Intellectual Property Law 2020 and

¹⁰ Intellectual asset management - businesses limit potential risks [*Quản lý tài sản trí tuệ - doanh nghiệp hạn chế rủi ro tiềm ẩn*]. (2023, September 7). *Số Khoa học và Công nghệ*. Retrieved April 8, 2024, from https://shkcn.bacgiang.gov.vn/chi-tiet-tin-tuc/-/asset_publisher/4roH7oNwBEIm/content/quan-ly-tai-san-tri-tue-doanh-nghiep-han-che-rui-ro-tiem-an

¹¹ *Corporate Intellectual Property Development and Management*. (n.d.). Hayes Soloway, P.C. Retrieved April 8, 2024, from <https://www.hayes-soloway.com/intellectual-property-development-and-management>

regulations and instructions of the Ministry Education on intellectual property management at universities, such as Regulations on the management of technological inventions at schools.

The group of authors will analyze relevant legal regulations in Vietnam, international conventions, agreements and a number of related legal regulations of the USA, Japan and China.

5.1. History of Legal Development of Patent Management and Exploitation in Vietnam

The development history of regulations on patent management and exploitation at universities in Vietnam is divided into three main parts, including: regulations on intellectual property, regulations of higher education law and regulations on technology transfer law.

5.2. Legal Documents Related to Intellectual Property Law

Legal documents related to the Intellectual Property Law include Ordinance on The Protection of Industrial Property Rights 1989, Decree 63/CP of the Government detailing Industrial Property in 1996, Intellectual Property Law 2005 and Intellectual Property Law 2022.

The first one is Ordinance on The Protection of Industrial Property Rights 1989.

Vietnam's endeavor to join the World Trade Organization (WTO) in 1995, was a significant milestone in its journey toward international economic integration, the country's IP protection framework primarily relied on fundamental legal documents, notably the Ordinance on Protection of Industrial Property Rights (1989)¹². The ordinance formed the cornerstone of Vietnam's approach to safeguarding IP at the time. The enactment of the 1989 Ordinance represented a pivotal shift in Vietnam's stance on industrial property including patent protection, marking a departure from previous practices. It introduced a comprehensive set of protections for inventions, utility solutions, industrial designs, and trademarks, including the recognition of exclusive patent rights. Subsequently, Decree 84-HDBT was issued to amend and supplement specific provisions concerning industrial property objects, further refining the legal framework governing IP protection.

A significant leap forward in Vietnam's IP legal framework occurred with the adoption of the Civil Code on October 29, 1995, which came into effect on July 1, 1996. This landmark legislation consolidated and streamlined existing laws on civil matters, providing a robust legal foundation for property and civil rights. Importantly, the 1995 Civil Code superseded previous regulations on intellectual property, encompassing comprehensive provisions on industrial property rights, including inventions, utility solutions, industrial designs, trademarks, and appellations of origin of goods, as well as copyright.

To implement the provisions of the Civil Code effectively, the government issued a series of corresponding regulatory documents in the fields of industrial property and copyright. These regulatory measures served to operationalize the Civil Code's provisions and ensure their effective enforcement.

Furthermore, notable revisions were made to the 1995 Civil Code and its accompanying regulatory guidelines to align with the requirements of the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS Agreement) and other international treaties to which Vietnam was a signatory. This demonstrated Vietnam's commitment to upholding international standards of intellectual property protection and fostering a conducive environment for innovation and creativity¹³.

It can be seen that the Ordinance on the Protection of Industrial Property Rights dated January 28, 1989 is the first legal document on industrial property protection activities in Vietnam but does not specifically regulate patent management and exploitation in universities. However, this is the starting document, serving as the foundation for the development of regulations on the management and development of IP in general and patent in particular at universities in Vietnam. Specifically, in the

¹² IP Vietnam. (2021, July 7). *The journey of building and developing policies and laws on intellectual property [Chặng đường xây dựng và phát triển chính sách, pháp luật về sở hữu trí tuệ]*. IP Vietnam. Retrieved April 8, 2024, from https://www.ipvietnam.gov.vn/tin-tuc-su-kien/-/asset_publisher/7.xsjBfjghCDAV/content/chang-uong-xay-dung-va-phat-trien-chinh-sach-phap-luat-ve-so-huu-tri-tue?inheritRedirect=false

¹³ Overview [Tổng quan] - Vision & Associates. (n.d.). Retrieved April 8, 2024, from <http://vision-associates.com/vi/overview/?print=print>

opening words of the Ordinance, it is stated: “In order to protect the legitimate rights and interests of organizations and individuals engaged in industrial property activity; to encourage the creation and effective utilization of scientific and technological achievements, promote national social and economic development and contribute to the expansion of economic, scientific and technological relations with foreign countries; In accordance with articles 72 and 100 of the Constitution of the Socialist Republic of Vietnam; This Ordinance provides for the protection of industrial property rights in Vietnam”. A number of laws also stipulate the management and development of industrial property activities, such as Clause 1, Article 5: "The Council of Ministers carries out general management and promulgates policies to encourage and develop industrial property activities", Article 6: “Responsibilities of grassroots units in developing industrial property activities. Production, business, service and scientific and technical research units are responsible for creating favorable conditions for workers to create, test and perfect Inventions, Useful Solutions, and Designs. industry; Take measures to ensure that industrial property objects are protected promptly and used effectively, ensuring the author's legitimate rights and interests.”¹⁴

Decree 63/CP of the Government detailing Industrial Property in 1996 is the second legal document of intellectual property laws. Decree 63/CP of 1996 is an important legal document detailing content related to industrial property rights in Vietnam, including provisions on subjects and conditions for protecting rights. Industrial property such as inventions, industrial designs, trademarks, and names of origin of goods are specifically stipulated in Article 4. In addition, this Decree also stipulates the basis for arising rights. industrial property and the rights of authors of inventions, utility solutions, industrial designs as well as the order and procedures for granting protection titles. The reason this Decree is mentioned is because the main intellectual property created in the higher education environment is inventions. This Decree is one of the foundations for forming the Intellectual Property Law and is a prerequisite for legal documents on the management and development of intellectual property in universities in Vietnam.

The third legal document is Intellectual Property Law 2005, modified and amended by the Intellectual Property Law 2022. Vietnam's 2005 and 2022 Intellectual Property Law play an important role in the management and development of IP in general and patent in particular at universities. The Intellectual Property Law along with its guiding documents is the basic legal framework for managing, protecting and exploiting intellectual property in Vietnam, including intellectual property created from research and training activities of universities. Second, the Law clearly stipulates principles of intellectual property rights for inventions, industrial designs, and integrated circuit layout designs created arising from scientific and technological research tasks using state budget. This helps universities determine ownership and have a basis for exploiting patent from research activities. This is the premise for regulating ownership of research results.

Thirdly, the law regulates the transfer of intellectual property rights between organizations and individuals by way of assignment and granting of use rights. This creates a legal basis for universities to exploit and transfer patent to other businesses and units.

In addition, the Law also provides regulations on registration procedures to establish rights to various intellectual property objects such as inventions, industrial designs, trademarks. Universities must follow this process to establish and protect intellectual property rights for their assets. To conclude, the Intellectual Property Law creates an important legal foundation for universities to effectively establish, manage, protect and exploit intellectual property created from training and research activities, which contributes to promoting technology transfer and innovation activities.

6. Legal Documents Related to Higher Education Law

The management and exploitation of IP in general and patent in particular at universities is also related to the 2012 Law on Higher Education. Accordingly, Clause 1, Article 4 of the Law on Higher Education 2012 (amended and supplemented by Clause 2, Article 1 The revised Higher Education Law 2018) concept of higher education institution is explained as: “Former education is the form of education

Article 5, 6 of the Ordinance on the Protection of Industrial Property Rights.¹⁴

in which full-time courses are provided at higher education institutions in order to implement a training program at a certain level of higher education”¹⁵. It is obvious that a higher education institution's goal is to educate and produce qualified human resources to support societal growth while also giving its students access to a high degree of information. Consequently, it is clear that IP assets in higher education are involved in a conglomeration of legal frameworks designed to legally safeguard the rights and legitimate interests of owners and holders of IP rights in general and patent rights in particular against third parties¹⁶.

In addition, Circular 26/2021/TT-BGDĐT on Science research activities of students in higher education institutions also regulates the responsibilities of higher education institutions in Article 10 as follows:

"1. Issuing regulations on the organization and implementation of students' scientific research activities, including the following contents:

- a) Procedures for proposing, approving, organizing, evaluating, and accepting students' scientific research topics;
- b) Regulations on rewarding students, student groups, and instructors with outstanding achievements in scientific research activities; honoring organizations and individuals with significant contributions to students' scientific research activities;
- c) Regulations on handling violations of students and instructors regarding the regulations on students' scientific research activities according to current regulations;
- d) Clearly defining the functions, tasks of units, organizations, and individuals regarding students' scientific research activities; the obligations and rights of students, instructors guiding students' scientific research, and related organizations and individuals;
- e) Regulations on other relevant contents related to students' scientific research activities.

2. Issuing and implementing annual and long-term plans for students' scientific research activities, ensuring compliance with the objectives and orientations of higher education institutions and current regulations.

3. Issuing regulations on funding for students' scientific research activities within the financial regime of higher education institutions, ensuring compliance with current regulations.”¹⁷

Furthermore, the Circular also stipulates the responsibilities and rights of student research advisors and students in Article 11 and Article 12 of the Circular as follows:

"Article 11. Responsibilities and rights of student research advisors:

1. Research advisors are responsible for participating in guiding students' scientific research, being responsible for the content of the assigned research topics, and fully complying with the principles of research ethics and current regulations.
2. Research advisors are entitled to count research hours, receive remuneration, and other benefits according to the regulations of higher education institutions after completing the guidance of students' scientific research.
3. Research advisors of students' scientific research with excellent results, achieving scientific and technological awards at home and abroad, or research results applied and implemented with socio-economic effectiveness are prioritized in the selection of commendation titles at all levels and other forms of rewards.”¹⁸

"Article 12. Responsibilities and rights of students participating in scientific research:

Responsibilities of students:

- a) Conduct scientific research in an honest and serious manner.
- b) Take responsibility for carrying out research topics for students; participate in conferences, scientific

The Law on Higher education 2012¹⁵

¹⁶ Hoan N. T. (2023), How is intellectual property ownership of scientific research results in higher education institutions regulated? [Quyền sở hữu tài sản trí tuệ đối với kết quả nghiên cứu khoa học trong cơ sở giáo dục đại học được quy định như thế nào?] *Thư Viện Pháp Luật*. Retrieved April 10, 2024, from <https://thuvienphapluat.vn/phap-luat/thoi-su-phap-luat/quyen-so-huu-tai-san-tri-tue-doi-voi-ke-t-qua-nghien-cuu-khoa-hoc-trong-co-so-giao-duc-dai-hoc-duoc-845681-74215.html>

Article 10 of Circular 26/2021/TT-BGDĐT on Science research activities of students in higher education institutions¹⁷

Article 11 of Circular 26/2021/TT-BGDĐT on Science research activities of students in higher education institutions¹⁸

seminars, forums, and other scientific and technological activities at higher education institutions.

c) Comply with intellectual property laws, scientific and technological activities, and other current legal regulations.

Rights of students:

- a) Propose and register to carry out scientific research topics.
- b) Be provided with conditions to use the available facilities and equipment of higher education institutions to conduct research activities.
- c) Be supported with research funding according to the prescribed quota of higher education institutions.
- d) Be published and supported in publishing research results in scientific journals, proceedings, and other scientific and technological publications at home and abroad as regulated.
- e) Be supported in registering intellectual property rights for research results according to current regulations.
- f) Be considered for priority in academic point accumulation, training point accumulation, priority for scholarships, commendation titles, and other forms of rewards according to the regulations of higher education institutions.
- g) Enjoy other benefits as prescribed.¹⁹

The regulations in Circular 26/2021/TT-BGDĐT regarding students' scientific research activities at universities have significant impacts on the patent management and exploitation at universities. As mentioned, students' scientific research is also considered intellectual property classified under patent or/and copyright. By clearly defining the roles, responsibilities, and rights of relevant parties such as students, research advisors, and universities, the patent management and exploitation in the university environment becomes more effective.

This regulation establishes a legal framework and clear procedures for the scientific research activities of students. It defines the responsibilities of supervising professors in guiding students in scientific research, ensuring the exclusivity and intellectual property rights of research results. This simultaneously encourages students to participate in scientific research activities and provides support for the publication and dissemination of research findings.

The regulation also ensures that students receive priority in academic achievements, scholarships, and honors related to scientific research activities. This promotes the development of students' intellectual assets and motivates creativity and research within the university community. Additionally, the regulation guarantees students the right to register intellectual property protection for their research results and receive financial support as stipulated, thereby promoting the development of intellectual assets in the university environment.

In summary, the provisions in Circular No. 26/2021/TT-BGDĐT create a mechanism for managing and exploiting intellectual assets in general and patent in particular relating to students' research activities at universities. This regulation not only helps effectively manage and exploit patent but also encourages creativity and the development of intellectual assets within the university community, contributing to the overall scientific and technological development of the country.

7. Legal Documents Related to Technology Transfer Law

The Law on Technology Transfer is the premise for forming Decree 109/2022/ND-CP on regulating science and technology activities in higher education institutions. Right in Article 1, it is stipulated on the management of technology transfer: "This Law deals with the transfer of technologies in Vietnam, from foreign countries to Vietnam and vice versa; rights and obligations of organizations and individuals participating in technology transfer activities; evaluation of technology applied to investment projects; technology transfer agreements; measures to encourage the technology transfer, development of the science and technology market; state management of technology transfer"²⁰. Because universities are essential to the creation and advancement of cutting-edge technology, this law is crucial

Article 12 of Circular 26/2021/TT-BGDĐT on Science research activities of students in higher education institutions¹⁹
Article 1 of Law on Technology transfer.²⁰

in shaping regulations for the management and development of intellectual property. Information and communications, energy and environment, manufacturing and industrial technology, healthcare and pharmaceuticals, and energy and environment are among the technology kinds that have been moved²¹. Universities can improve their standing and establish themselves as hubs for technological research and development with the aid of technology transfer. Universities can forge close ties with nearby companies and communities through the process of technology transfer, support academic institutions in developing a more thorough grasp of real market demands and needs, allowing research and training to be focused appropriately.

Technology transfer activities will recognize from the outset the application potential of research while fostering creative thinking and the applicability of knowledge, and they will also encourage creativity and applied research among researchers and students. Additionally, it improves their communication and professional abilities, which will aid them later on when they operate in actual contexts and need to be adaptable²².

Businesses that have access to the newest university technologies and solutions will, in the meanwhile, be able to increase productivity and save expenses by streamlining manufacturing processes and improving product quality. In summary, a legal foundation and regulatory framework for technology transfer are established by the Law on Technology Transfer and Decree 109/2022/ND-CP on regulations on science and technology activities in higher education institutions. Additionally, collaboration between universities and businesses is encouraged to foster innovation, applied research, and technology development in practical applications.

On December 24, 2020, the Prime Minister signed Decision No. 2205/QĐ-TTg approving the Intellectual Property Development Program until 2030.

The overall goal of the Intellectual Property Development Program until 2030 is to make intellectual property and patent an important tool to improve national competitiveness, create an environment to encourage innovation and promote economic, cultural and social development.

Detail goal:

a) By 2025:

- “100% of universities and research institutes are propagating, raising awareness and supporting intellectual property rights protection for scientific research and innovation results;
- At least 40% of products are recognized as national products, key national products, key products and services, specific to provinces and centrally run cities, and products associated with each Program. One commune one product (OCOP Program) is supported in registering for protection, managing and developing intellectual property, controlling origin and quality after being protected”²³.

b) By 2030:

- “The number of patent protection applications from research institutes and universities increases by an average of 16 - 18%/year; The number of applications for plant variety protection increased by an average of 12 - 14%;
- At least 60% of products are recognized as national products, key national products, key products and services, specific to provinces and centrally run cities, and products associated with the OCOP Program receive support for registration of protection, management and development of intellectual property, control of origin and quality after being protected;

²¹ Tphcm.Chinhphu.Vn. (2023, September 8). Technology transfer in universities: What benefits do all parties benefit? [Chuyển giao công nghệ trong trường đại học: Các bên được lợi gì?]. Retrieved 15 April 2024 from: [tphcm.chinhphu.vn. https://tphcm.chinhphu.vn/chuyen-giao-cong-nghe-trong-truong-dai-hoc-cac-ben-duoc-loi-gi-10123090810415873.htm](https://tphcm.chinhphu.vn/chuyen-giao-cong-nghe-trong-truong-dai-hoc-cac-ben-duoc-loi-gi-10123090810415873.htm)

²² Tphcm.Chinhphu.Vn. (2023, September 8). Technology transfer in universities: What benefits do all parties benefit? [Chuyển giao công nghệ trong trường đại học: Các bên được lợi gì?]. Retrieved 15 April 2024 from: [tphcm.chinhphu.vn. https://tphcm.chinhphu.vn/chuyen-giao-cong-nghe-trong-truong-dai-hoc-cac-ben-duoc-loi-gi-10123090810415873.htm](https://tphcm.chinhphu.vn/chuyen-giao-cong-nghe-trong-truong-dai-hoc-cac-ben-duoc-loi-gi-10123090810415873.htm)

²³ Decision No. 2205/QĐ-TTg approving the Intellectual Property Development Program until 2030.

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To achieve the above goals, the Program includes the following contents: Strengthening intellectual property creation activities, improving the quality of human resources in innovation and intellectual property; Promote registration of intellectual property protection at home and abroad; Improve the efficiency of management, exploitation and development of intellectual property; Promote and enhance the effectiveness of enforcement and anti-infringement of intellectual property rights; Develop and enhance the capacity of intermediary organizations and intellectual property rights holders; Form and create a culture of intellectual property in society.

It can be seen that the Government is increasingly paying attention to the issue of intellectual property development in higher education institutions because this is a training ground for nurturing creative talents as well as being able to easily convey knowledge

Decree 109/2022/ND-CP relating to the Regulations on scientific and technological activities in higher education institutions “set forth the organization and management of scientific and technological activities in higher education institutions; research groups and strong research groups in higher education institutions; scientific, technological and innovative activities in higher education institutions; develop scientific and technological potential in higher education institutions; responsibilities of agencies, organizations and individuals for scientific and technological activities in higher education institutions.”²⁵ The Decree is one of the bases for building regulations on the management and development of intellectual property and technology transfer centers in universities, including regulations such as organization and management of activities; science and technology in higher education institutions; research groups in university facilities; science, technology and innovation activities in higher education institutions; invest and develop scientific and technological potential; and responsibilities of agencies, organizations and individuals for science, technology and innovation activities. The Decree specifically stipulates the roles of ministries and branches such as the Ministry of Education and Training, the Ministry of Science and Technology, the Ministry of Finance, the Ministry of Planning and Investment and especially the responsibilities of educational institutions. university education. This Decree stipulates financial support to promote research and innovation, thereby helping to promote technology transfer in the university environment.

8. International Legal Regulations on Patent Management and Exploitation at Universities and Their Impacts on Vietnamese Laws

In addition to domestic legal documents, a number of international agreements and conventions also regulate the management and development of intellectual property.

The TRIPS Agreement (Trade Related Intellectual Property Rights) is one of the international agreements concerning aspects related to trade in intellectual property rights. The TRIPS Agreement is built upon existing international conventions on Intellectual Property such as the Paris Convention of 1967, the Berne Convention of 1971, the Rome Convention of 1981, and the Washington Agreement of 1989. The agreement on aspects related to trade of intellectual property rights (TRIPS Agreement) within the framework of the World Trade Organization (WTO), signed on April 15, 1994, has transformed the landscape of the global intellectual property system. The TRIPS Agreement stands as the most comprehensive multilateral agreement to date on intellectual property rights. Its regulatory scope is vast, encompassing various fields of intellectual property such as copyright, trademarks, geographical indications, industrial designs, etc., all of which are specifically stipulated.

When joining the TRIPS-WTO Agreement, member countries have an obligation to provide full and effective protection and enforcement of intellectual property rights to the citizens of other member countries. When Vietnam applied for WTO membership in 1995, there were numerous obstacles that needed to be addressed, particularly in the domestic legal system. The requirement was to innovate and improve the legal system, including the intellectual property system, in line with the standards of the TRIPS-WTO Agreement. As we know, by 1995, the intellectual property protection system mainly

Decision No. 2205/QĐ-TTg approving the Intellectual Property Development Program until 2030.²⁴

²⁵ Article 1 of Decree 109/2022/ND-CP Regulations on science and technology activities in higher education institutions.

consisted of documents under the law (with low legal effectiveness) such as the Industrial Property Protection Ordinance of 1989, the Copyright Protection Ordinance of 1994, etc., many of which were not fully aligned with international norms.

On October 28, 1995, the Civil Law Code (CLC) was passed by the IX National Assembly, marking a significant step in perfecting the intellectual property protection regime. For the first time, intellectual property rights were recognized as civil rights (as stipulated in Part VI of the Code) and were endorsed by the highest authority. However, some intellectual property rights subjects protected by the TRIPS Agreement were not yet regulated in this Code, such as patent, trademarks, trade secrets, geographical indications, with the reason being "no practical experience" in our country. In the following years, through Government Decrees, Vietnam gradually regulated these areas and basically met the requirements of the TRIPS Agreement for a comprehensive legal system to protect intellectual property rights²⁶.

In 2005, a new Civil Law Code was issued to replace the 1995 Code, and provisions on intellectual property continued to affirm the direction of being "basic provisions" as a basis for issuing a separate law in this field. Also in 2005, the Intellectual Property Law was passed by the National Assembly (continuously amended and supplemented in 2009), demonstrating the determination of the State in promoting intellectual property protection and actively integrating into the international community²⁷.

The issuance of the Intellectual Property Law and a series of implementing regulations has established a legal system on intellectual property and created a safe legal corridor, encouraging creative activities and protecting the achievements of creative labor. Another important aspect is the alignment of intellectual property regulations with international standards and Vietnam's commitments upon joining the WTO.

Regarding the general development of intellectual property, the TRIPS Agreement has stipulated in Part VII "Recognition of the fundamental societal objectives of national intellectual property protection systems, including developmental and technological objectives." These provisions are in the mechanisms and final provisions section. These are considered the first steps in forming and developing regulations on the management and exploitation of IP in general and patent in particular in universities.

Moreover, The Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) stands as a monumental trade pact, facilitating the removal of trade barriers among 11 economies in the Asia-Pacific region, with Vietnam being a notable participant. Since its inception on January 14, 2019, the agreement has significantly impacted Vietnam's legal landscape, particularly in the realm of intellectual property (IP) regulations outlined in Chapter 18 of the CPTPP Agreement.

Furthermore, the CPTPP serves as a catalyst for the development and management of intellectual property (IP) within the Asia-Pacific region. By setting high standards and promoting innovation, the agreement incentivizes member countries to invest in research and development, thereby leading to economic growth and enhanced competitiveness in the global market. Additionally, the agreement facilitates the effective management of IP by establishing clear rules and procedures for enforcing IP rights and resolving disputes, ensuring investor confidence, promoting trade and investment, and safeguarding the interests of creators, innovators, and businesses.

Moreover, the CPTPP opens doors for international collaboration in education and research, creating favorable conditions for universities to partner with international counterparts. With provisions for intellectual property protection and inter-sectoral cooperation, universities can easily share knowledge, technology, and resources, thereby advancing their development in intellectual property.

²⁶ Hien, T. T. (2011, December 11). *TRIPS Agreement and Vietnamese law on intellectual property* [Hiệp định TRIPS và pháp luật Việt Nam về sở hữu trí tuệ]. Đắk Lắk Điện tử. Retrieved April 10, 2024, from <https://www.baodaklak.vn/channel/3485/201112/hiiep-dinh-trips-va-phap-luat-viet-nam-ve-so-huu-tri-tue-2116772/>

²⁷ Hien, T. T. (2011, December 11). *TRIPS Agreement and Vietnamese law on intellectual property* [Hiệp định TRIPS và pháp luật Việt Nam về sở hữu trí tuệ]. Đắk Lắk Điện tử. Retrieved April 10, 2024, from <https://www.baodaklak.vn/channel/3485/201112/hiiep-dinh-trips-va-phap-luat-viet-nam-ve-so-huu-tri-tue-2116772/>

Trade agreements such as the CPTPP also expand markets and create favorable conditions for research and development investment. With intellectual property protection and promotion of collaboration between businesses and research organizations, universities can attract more resources for research and development projects, enhancing competitiveness and innovation in this field²⁸.

Additionally, the promotion of technology transfer from developed to developing countries is facilitated by trade agreements like the CPTPP. Through intellectual property and patent protection mechanisms and collaboration incentives, universities can leverage these opportunities to learn from leading technology companies and apply new knowledge to research and teaching activities.

Furthermore, trade agreements foster creativity and innovation in education by creating favorable conditions for the protection and promotion of intellectual property. Through intellectual property and patent protection mechanisms and encouragement of collaboration among stakeholders, universities can encourage students, faculty, and researchers to continue innovating and creating new value in this field.

In summary, trade agreements such as the CPTPP provide a solid foundation for the development of regulations on the management and exploitation of intellectual property in general and patent in particular at universities by facilitating international collaboration, boosting investment in research and development, promoting technology transfer, and encouraging creativity and innovation in education.

The EVFTA Agreement is a new generation free trade agreement between Vietnam and 28 EU member countries. EVFTA, along with CPTPP, are two FTAs with the widest scope of commitments and the highest level of commitment of Vietnam ever. The Agreement was signed on June 30, 2019, ratified by the European Parliament on February 12, 2020, and ratified by the National Assembly of Vietnam on June 8, 2020, effective from date August 1, 2020. EVFTA is considered comprehensive, high quality, balanced in benefits for both Vietnam and the EU, and in accordance with the regulations of the World Trade Organization (WTO), and Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPs). The content of intellectual property is in Chapter 12 of the Agreement, including 63 articles and 2 appendices. The main content of this chapter includes commitments on the principles of intellectual property rights protection, the scope of intellectual property rights, inventions, industrial designs, trademarks, geographical indications, and secret information. honey, plant varieties, exhaustion of rights and enforcement of intellectual property rights. The purpose of Chapter 12 is:

“1. The objectives of this Chapter are to:

(a) facilitate the creation, production and commercialization of innovative and creative products between the Parties, contributing to a more sustainable and inclusive economy in each Party; and

(b) achieve an adequate and effective level of protection and enforcement of intellectual property rights.

2. The protection and enforcement of intellectual property rights should contribute to the promotion of technological innovation and to the transfer and dissemination of technology, to the mutual advantage of producers and users of technological knowledge and in a manner conducive to social and economic welfare, and to a balance of rights and obligations.”²⁹

This objective has demonstrated a persistent mindset when it comes to overseeing and advancing intellectual resources, which are crucial for fostering creativity and technological advancements. While this Agreement does not specifically address the management and development of intellectual property within universities, it is recognized as an international legal instrument that effectively facilitates the implementation of regulations governing intellectual property management and development mechanisms in Vietnamese universities.

In addition, Chapter 16, the final chapter of the Agreement on Cooperation and Capacity Building, also clearly stipulates that:

“3. Cooperation between the Parties must be carried out primarily through the exchange of

²⁸ *Enforcing intellectual property rights under CPTPP, EVFTA and requirements for Vietnam [Thực thi quyền SHTT theo CPTPP, EVFTA và yêu cầu đối với Việt Nam]*. (n.d.). Retrieved April 9, 2024 from <https://vjst.vn/vn/tin-tuc/3472/thuc-thi-quyen-shtt-theo-cptpp--evfta%20-%A0-va-yeu-cau-doi-voi-viet-nam.aspx>

²⁹ Article 12.1 of European Union-Vietnam Free Trade Agreement

information, experience and best practices, as well as policy cooperation. Where appropriate, workshops, conferences, training courses, research, technical assistance and capacity building may be considered.”³⁰

The EVFTA (European Union-Vietnam Free Trade Agreement) has significant impacts on the management and exploitation of intellectual property assets in general and patent in particular at universities.

Firstly, regarding the issue of intellectual property protection, the EVFTA commits to ensuring a level of protection and effective enforcement of intellectual property rights. This contributes to safeguarding the works, inventions, industrial designs, and trademarks of scientists, lecturers, and students in universities. Protecting intellectual property rights helps foster creativity and innovation in research and development within universities.

Secondly, this agreement encourages cooperation and information exchange, as mentioned in Chapter 16 of the EVFTA. This chapter emphasizes collaboration between parties through the exchange of information, experiences, and best practices. This opens up opportunities for universities in Vietnam to enhance cooperation with partners from EU member countries in the field of intellectual property assets. Workshops, conferences, training programs, research, and technical support can also be organized to enhance the capacity and creativity of higher education institutions.

Thirdly, concerning technology transfer, the EVFTA promotes technology transfer between parties and the beneficial dissemination of technology to both users and producers of technological knowledge. This can create favorable conditions for the transfer of technology from universities to businesses and vice versa, from EU partners to Vietnam and vice versa. This can stimulate the development of technology and technical capabilities in universities and contribute to enhancing Vietnam's competitiveness.

Fourthly, the EVFTA provides opportunities for universities to receive technical support, enhance capacity, and training from EU partners. This support can help improve the quality of teaching and research in universities, enhance international cooperation, and elevate the position of Vietnamese higher education institutions in the international market.

In summary, the EVFTA not only impacts the management and development of intellectual property assets in universities but also creates new opportunities and challenges. Implementing the commitments and leveraging the benefits of the EVFTA can help Vietnamese universities enhance competitiveness, promote technological innovation, strengthen international cooperation, and improve the quality of teaching and research. This will contribute to the sustainable development and international integration of the higher education system in Vietnam. However, to maximize the potential of the EVFTA in the field of intellectual property, universities need to focus on building effective policies, procedures, and intellectual property management systems, while also strengthening cooperation and information exchange with international partners to seize opportunities and challenges in the era of global economic integration.

9. Legal Regulations on Patent Management and Exploitation at Universities in Some Countries Around the World

Japan

Japan's Intellectual Property Basic Act 2002 sets out a number of important regulations related to the management and development of intellectual property at universities as follows:

“Article 1 (Purpose)

The purpose of this Act is, for the objective of realizing a dynamic economy and society that is based on the creation of added values through the creation of new intellectual property and effective exploitation of such intellectual property in light of a growing necessity for intensifying the international competitiveness of Japanese industry in response to the changes in the social and economic situations at home and abroad, to promote measures for the creation, protection and exploitation of intellectual property in a focused and systematic manner by stipulating the basic

³⁰ Article 16.2 of European Union-Vietnam Free Trade Agreement

principles on the creation, protection and exploitation of intellectual property and the basic matters to achieve the principles, clarifying the responsibilities of national government, local governments, universities, etc. and business operators, establishing the Intellectual Property Strategy Headquarters, and providing stipulations on the development of a strategic program on the creation, protection and exploitation of intellectual property.”³¹

“Article 7: Responsibilities of the university

(1) Universities, etc. shall, in light of the fact that their activities are contributing to the creation of intellectual property in the whole society, endeavor voluntary and positive to develop human resources, disseminate research and the research results.

(2) Universities, etc. shall endeavor to assure proper treatment of researchers and engineers and to establish and improve research facilities so that the duties and working environments of such researchers and engineers will be attractive and suitable for their importance.

(3) In formulating and implementing measures for the creation, protection and exploitation of intellectual property pertaining to universities, colleges of technology and inter-university research institutions, national government and local governments shall consider the respect for researchers' autonomy or other characteristics of the research that is carried out at universities, colleges of technology and inter-university research institutions.”³²

Article 25 (affairs under the jurisdiction)
The Headquarters shall take charge of the affairs listed in the following items:
(i) Development of the strategic program, and promotion of the implementation of the program.
(ii) In addition to what is prescribed in the preceding item, study and deliberation on planning important measures on the creation, protection and exploitation of intellectual property, and promotion and comprehensive adjustment of implementation of the measures.”

Overall, this Act plays an important role in establishing a comprehensive legal framework for the development and protection of intellectual property in Japan, to promote innovation and enhance the competitiveness of the economy.

Japan National University Corporation Act 2003 is a major innovation in the management of public universities in Japan. The main goal of this law is to enhance the competitiveness, efficiency and transparency of Japanese public universities. Some notable provisions in this law include: Granting greater autonomy to national universities: This law transfers national universities from state agencies to independent administrative agencies. This allows schools to have more autonomy in strategic decision-making, human resources and finances. Second, separation of management and legislative roles: the law separates the management role of universities from the Ministry of Education, and creates a new agency, the National University Corporation Evaluation Committee, to monitor and evaluate schools. Third, business operations budget: national universities are allowed to establish companies and engage in business activities to generate additional revenue outside the state budget. Fourth is the new funding mechanism. Specifically, the law introduces a new funding system for universities based on performance instead of a fixed annual budget. Finally, this Act has changed the working regime of lecturers, specifically the law allows the application of fixed-term labor contracts with lecturers instead of a lifetime civil servant regime³³.

United State of America

The Bayh-Dole Act, formerly known as the Patent and Trademark Act Amendments, is a federal law enacted in 1980 that enables universities, nonprofit research institutions and small businesses to own, patent and commercialize inventions developed under federally funded research programs within

³¹ Article 1 of Intellectual Property Basic Act 2002

³² Article 25 of Intellectual Property Basic Act 2002

³³ National University Corporation Act 2003.

their organizations³⁴.

The act established a standard patent policy for all federal research funding bodies. To ensure that the process functions, Congress perceived the necessity for dependable technology transfer methods and a unified set of federal regulations. In the end, the act has inspired an increasing number of colleges to take a proactive role in bringing technology from the lab to the marketplace. It permits academic institutions to actively license and maintain ownership of this technology³⁵.

According to this Act, the university is entitled to retain ownership of any inventions created as a result of federal funding, unless the funding agency informs the University up front that the agency will retain title to inventions derived from the funded projects because of specifically identified "exceptional circumstances" or other specified conditions. When a university innovator discloses the creation of an invention derived from federally funded research, the university has two months from that date to disclose that information to the appropriate federal agency. The university also must patent all inventions it elects to own and commercialize³⁶.

Furthermore, the university must make a diligent effort to develop and commercialize the invention. Failure to do so may result in the federal government exercising its right to take control of the invention. In addition, the government may also assert control over the invention in situations where there is a need to address health or safety concerns. This provision is commonly known as the government's "march-in" rights.³⁷

As part of the agreement, the university is required to provide the U.S. government with a nontransferable, irrevocable, paid-up, nonexclusive license known as a "confirmatory license" to use the invention. Along with this license, the University generally must prioritize small businesses while maintaining the fair-market value of the invention when granting licenses to use it³⁸.

Moreover, if the university decides to grant an exclusive license, it must ensure that the invention will be "manufactured substantially" in the United States³⁹. This requirement aims to promote domestic manufacturing and economic growth⁴⁰.

It is important to note that any excess revenue generated from the commercialization of the invention must be allocated to support research and education within the University. Additionally, the University is obligated to share a portion of the royalties received from the invention with the inventor(s), recognizing their contribution and incentivizing innovation⁴¹.

China

China Intellectual Property Law has regulations on patent exploitation and management at universities and research facilities. The main provisions related to this issue are contained in Chapter 6 - Invention Rights, especially Article 76.

Article 76 stipulates:

"Ownership of inventions acquired in the performance of an entity's duties or as a result of its materials and grants shall belong to that entity. After an invention is protected by industrial property rights, the unit will prescribe appropriate reward measures to encourage invention.

Ownership of an invention not within the scope specified in Clause 1 of this Article shall belong to the employee or inventor. If an invention is used by an entity, the entity must pay a usage fee to the

³⁴ Bayh-Dole Act - Office of Research & Innovation. (n.d.). Office of Research & Innovation. Retrieved 24 April 2024 from <https://drexel.edu/research/innovation/technology-commercialization/bayh-dole-act/#:~:text=The%20Bayh%2DDole%20Act%2C%20formerly,research%20programs%20within%20their%20organizations>

Bayh-Dole Act - Office of Research & Innovation. (n.d.). Office of Research & Innovation. Retrieved 24 April 2024 from ³⁵ <https://drexel.edu/research/innovation/technology-commercialization/bayh-dole-act/#:~:text=The%20Bayh%2DDole%20Act%2C%20formerly,research%20programs%20within%20their%20organizations>

Bayh-Dole Act 1980³⁶

Bayh-Dole Act 1980³⁷

Bayh-Dole Act 1980³⁸

³⁹ United State General Accounting Office. (n.d.). *Administration of the Bayh-Dole Act by Research Universities*. GAO.GOV. Retrieved May 7, 2024, from

https://www.gao.gov/assets/rced-98-126.pdf?fbclid=IwZXh0bgNhZW0CMTAAAR1bEi7PA6b3LMDIE.caPOdEgXw1ShHbCuaTLlrE71OFSYdwabMgspZF17M_aem_ATGg_lgzamfujHHA_EfjOQJNLXV_DuqoqfVkBEEuunLKBs5-NqicnZLKOzrzr020aEbrXT_5M4e_w3NHLloofzBM8Yh

Bayh-Dole Act 1980⁴⁰

Bayh-Dole Act 1980⁴¹

employee or inventor according to the provisions of intellectual property law.”⁴²

It can be seen that this regulation is intended to protect the interests of universities and research institutes in owning inventions from the school's research and teaching activities. The regulations also encourage innovation by requiring schools to have incentives to encourage inventions. However, the regulations are still limited by not allowing researchers to independently own their inventions within the scope of the school's tasks and resources. In general, in terms of protecting personal rights, the regulations ensure intellectual property rights for inventions outside the scope of official duties and require schools to pay a fee if they use that invention.

10. Conclusion

In Vietnam, innovation is considered a crucial factor in socio-economic development. This perspective was formed during the 6th National Congress of the Communist Party in 1986 with the push for industrialization and has been reaffirmed in subsequent congresses. The 7th National Congress in 1991 emphasized the pivotal role of science and education in building socialism and defending the nation: “Science and education play a key role in the entire cause of building socialism and defending the nation, serving as a driving force to lift the country out of poverty and backwardness and reach the advanced level of the world.”⁴³

In the current context, the reform of patent exploitation and management in universities is both urgent and essential for several reasons.

First, Resolution No. 27-NQ/TW of 2022 by the Central Committee stressed the importance of enhancing the management and effective exploitation of IP assets, especially in higher education institutions, to promote scientific research, technology transfer, and innovation activities.

Second, Vietnam's Intellectual Property Strategy to 2030, approved in 2020, also highlights the need to strengthen the patent management and exploitation in universities, focusing on improving the quality, value, and commercial potential of patent generated from research and training activities.

Third, in 2019, the Vietnam National University issued the “*Regulation on Intellectual Property Management*,” reflecting a growing interest in standardizing the management, exploitation, and protection of patent in leading universities. This initiative aims to motivate faculty and students to innovate while safeguarding the rights of the university.

Finally, in the competition to attract societal resources, universities are increasingly aware that effective patent utilization and commercialization can enhance revenue, consolidate their reputation, and improve their standing. This awareness serves as a crucial driver for innovation.

Furthermore, innovation is a central strategy for attracting foreign investors. Proper patent management and exploitation play a key role in this strategy. Effective patent management can maximize the value of inventions and new technologies, boost competitiveness, and attract investment. Establishing a stable legal framework to safeguard IP rights fosters creativity and enhances the appeal to foreign investors.

These viewpoints and practices create a new context requiring universities to promptly reform their perceptions and activities in patent management and exploitation to meet the urgent demands of enhancing innovation capacity, advancing digital transformation, integrating internationally, and attracting societal resources for education and research.

To address the challenges of patent management, and exploitation in higher education effectively, universities need a comprehensive strategy that incorporates various elements:

Firstly, organizing seminars and workshops is one solution to raise awareness among faculty, researchers, and students. These forums facilitate the exchange of information and encourage the enforcement of patent rights within universities. Such training sessions offer opportunities for open dialogue between participants and experts in the patent field. Practical discussions during these events help attendees understand the value of patent rights and the consequences of violations.

Secondly, beyond raising awareness, universities must build robust support systems to ensure the

Article 76 of China Intellectual Property Law ⁴²

⁴³ Comprehensive Documents of Party Communist [Văn kiện Đảng toàn tập], as cited, page 51, 110, 143, 139.

effective enforcement of IP rights. This includes forming specialized IP teams to assist researchers in identifying, categorizing, and securing rights to their intellectual creations. Intellectual Property Office of Vietnam has already introduced basic IP training courses for local science and technology management personnel. NOIP also plays a crucial role in university patent management, particularly in training professionals well-versed in patent commercialization and protection practices.

Thirdly, collaboration between the Ministry of Science and Technology and the Ministry of Education and Training is essential to support technology transfer efforts in universities. Initiatives like establishing technology transfer offices send a clear message about the importance of innovation and technology transfer at the national level. This approach encourages researchers and faculty to participate in technology transfer activities and attracts partnerships and investments from businesses, leading to collaborative research projects and advanced technology development. To strengthen this effort, amending Article 26 of Decree No. 109/2022/ND-CP to clarify the Ministry of Science and Technology's responsibility in supporting universities to establish and develop technology transfer centers is necessary. Such legal revisions would create a coordinated framework between ministries, ensuring efficient management and development of IP assets and knowledge transfer.

Lastly, if commercialization by universities proves infeasible, transferring ownership rights to individual inventors (faculty, researchers, or students) for self-commercialization should be considered. Universities can exploit and commercialize patent; however, their capacity for commercialization is often limited due to their primary focus on education rather than commerce.

In the context where innovation is a priority of the Party and State and an international requirement, patent management and utilization in universities have become imperative. Universities need to establish robust patent management systems with clear procedures for identifying, protecting, and effectively utilizing patent from research and teaching activities. Establishing technology transfer offices will play a vital role in this process, promoting the commercialization of new inventions and technologies.

By implementing these solutions, universities will significantly contribute to fostering innovation, enhancing competitiveness, and attracting both domestic and foreign investment. This will also align with the Party and State's direction on innovation, meeting global demands for knowledge-based economic development and intellectual property advancement.

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3. European-Vietnam Free Trade Agreement
4. Comprehensive and Progressive Agreement for Trans-Pacific Partnership
5. Ordinance on The Protection of Industrial Property Rights 1989.
6. Decree 63/CP of the Government detailing Industrial Property in 1996
7. Intellectual Property Law 2005
8. Higher Education Law 2012
9. Technology Transfer Law 2017
10. Science and Technology Law
11. Intellectual Property Law 2022
12. Circular 26/2021/TT-BGDDT Decision on Approving the Intellectual Property Development Program to 2030
13. Decree 109/2022/ND-CP on Science and Technology Activities in Higher Education Institutions
14. Circular 01/2007/TT-BKHCN
15. Regulations on Intellectual Property Management at Hanoi National University
16. Japan National University Corporation Act 2003
17. Intellectual Property Basic Act 2002
18. Bayh-Dole Act 1980
19. China Intellectual Property Law