



Commercializing Intellectual Property Rights Owned by Universities of Sri Lanka

Thushini Thewahettige

The Open University of Sri Lanka, Nawala, Sri Lanka

Email address of the corresponding author - thushinithewahettige@gmail.com

Abstract

In the context of modern business and innovation theories, the management of Intellectual Property Rights (Referred to as “IPO”) can be considered of utmost importance. Furthermore, it can be argued that the commercialization of these rights is a significant step among the mechanisms employed in the management of IPR. Commercialization can be defined as the process of bringing intellectual property to the market with the aim of generating future profits and fostering business growth.¹ Sri Lankan universities are rich in intellectual properties; therefore, it is essential to transform these assets into business opportunities to develop the country’s economy. This study explores the significance of commercializing IPR owned by universities in Sri Lanka, with a focus on the role it plays in the nation’s economic progress.

Keywords: Intellectual Property Rights; Commercialization; universities

1.0 Introduction to Intellectual Property Rights (IPR) and Commercializing of IPR

IPR provides legal protection to individuals and organizations regarding their intellectual creations, including inventions, trademarks, copyrights, and

patents. Serves as a mechanism to encourage innovation, creativity, and entrepreneurship by granting exclusive rights to creators and inventors, allowing them to benefit from their creations². The purpose of commercialization of IPR is to launch intellectual properties to the market with the intent of generating revenue and fostering economic expansion. The process includes combinations of tasks such as licensing, technology transfer, patenting, and the establishment of spin-off companies. Effective commercialization can lead to the widespread adoption of innovations and technologies, benefiting both the creators and society at large³.

Research Problem Statement

Despite the rich intellectual property (IP) potential within Sri Lankan universities, there is a lack of effective commercialization strategies to leverage these assets for economic development. This study

¹ Ziegler, N., Ruether, F., Bader, M. A., & Gassmann, O., ‘Creating Value through External Intellectual Property Commercialization: A Descriptive Capacity View’ (2013).

² Erstling, J., ‘The Protection of Intellectual Property - of Metaphysics, Motivation, and Monopoly’ <https://heinonline.org/HOL/LandingPage?handle=hein.journals/sljin13&div=6&id=&page=> accessed 15 July 2024.

³ Webster, A., & Rappert, B., ‘Regimes of Ordering: The Commercialization of Intellectual Property in Industrial-Academic Collaborations’ <https://www.tandfonline.com/doi/abs/10.1080/09537329708524274> accessed 15 July 2024.

aims to address the gap in transforming university-owned intellectual properties into profitable ventures that can contribute to Sri Lanka's economic growth. The challenge lies in identifying, managing, and commercializing intellectual property in a way that maximizes its impact on the nation's economy.

Research Questions

1. What are the current strategies employed by Sri Lankan universities for managing and commercializing intellectual property rights (IPR)?
2. How can the commercialization of university-owned IPR contribute to the economic development of Sri Lanka?
3. What are the barriers faced by universities in Sri Lanka in commercializing intellectual property?
4. What roles do industry partnerships and government policies play in facilitating the commercialization of IPR in Sri Lankan universities?
5. What best practices from global universities can be adapted to enhance the commercialization of intellectual property in Sri Lanka?

Research Objectives

To evaluate the current practices and strategies used by Sri Lankan universities in managing and commercializing their intellectual property.

To assess the economic impact of university-owned IPR commercialization on Sri Lanka's national economy.

To identify the challenges faced by Sri Lankan universities in bringing intellectual property to the market.

To analyze the role of industry partnerships and government policies in supporting IPR commercialization in Sri Lankan universities.

To propose strategies and best practices from global universities to improve the commercialization process of IPR in Sri Lanka.

Methodology

This study will basically be developed as a qualitative method.

Limitations

Limited availability of comprehensive data on intellectual property portfolios in Sri Lankan universities may affect the scope of analysis.

2.0 Overview of Intellectual Property Rights in Sri Lanka

Intellectual Property refers to creations of the mind, including inventions, literary and artistic works, symbols, names, images, and designs used in commerce⁴. And these creations are safeguarded by various intellectual property rights, such as trademarks, patents, and copyrights. Also, in recent years, the significance of concept of IPR has risen in Sri Lanka. Because the Government of Sri Lanka comprehend that IPR can boost the economic development of the country. Therefore, the Government has undertaken critical actions to protect and promote these rights.

However, the commercialization of intellectual property rights owned by universities in Sri Lanka is an area that has not been fully explored. Commercialization of intellectual properties can be defined as transforming the intellectual properties to economically feasible properties and services. Furthermore, commercializing IPR generates revenue and promotes the economic development of the country. The commercialization of intellectual property rights owned by universities in Sri Lanka has the potential to play a critical role in the economic development of the country⁵. In order to boost economy, it is essential to commercialize the IPR owned by Sri Lankan Universities. First and foremost, commercializing IPR can lead to new avenues

⁴ Nisansala, A., 'Commercializing University Research Outcomes: Sri Lankan Experience' <http://viduketha.nsf.gov.lk:8585/slsipr/PR6752/PR6752-163.pdf> accessed 15 July 2024.

⁵ Abeysekera, I., 'Intellectual Capital Reporting between a Developing and Developed Nation' (2007) 8 *Journal of Intellectual Capital* 329 <https://doi.org/10.1108/14691930710742871> accessed 15 July 2024.

for revenue generation. Additionally, Sri Lanka Universities play as hubs of research also contribute to product valuable intellectual property through their research activities. Further, by commercializing these intellectual property rights, universities can generate income through licensing agreements, royalties, and the sale of products or services based on their intellectual assets⁶.

4.0 Role of Universities in IPR

According to the above-mentioned facts that, it is clear that the Universities in Sri Lanka play a vital role in generating intellectual property through research activities conducted by faculty and students. The institutions which create inventions, innovations and discoveries have the capacity to resolve social challenges and stimulate economic growth. Besides, in the present day, Universities are recognized as key contributors to the knowledge economy, and their significance has risen. Moreover, they are encouraged to participate actively in IPR commercialization.

Additionally, Sri Lankan universities possess the capability to provide the vigilant care and high diligence maintaining IPR. Universities can be considered places where new ideas and research are nurtured. These ideas and research hold the promise of economic development and progress in the social sphere. However, without effective management and commercialization strategies, this intellectual property may remain underutilized and fail to contribute to the country's economic development⁷. Therefore, it is obvious that Sri Lankan Universities should actively engage in commercialization of their IPR. In order to do so, the universities should establish technology transfer

⁶ Mendis, P., 'Integrating Intellectual Property into Innovation Policy Formulation in Sri Lanka' https://www.wipo.int/edocs/pubdocs/en/wipo_report_inn_lk.pdf accessed 15 July 2024.

⁷ Nisansala, A., 'Commercializing University Research Outcomes: Sri Lankan Experience' <http://viduketha.nsf.gov.lk:8585/slsipr/PR6752/PR6752-163.pdf> accessed 15 July 2024.

offices or intellectual property management units within the universities. These units are tasked for identifying and safeguarding the intellectual property generated by the universities, while also actively exploring opportunities for commercialization. Additionally, universities have potential to create an innovation environment by actively managing and commercializing their intellectual property rights among their faculty members, students, and researchers. One of the benefits of commercialization of intellectual properties is to attract both local and foreign investments.

Investors are consistently interested in innovative technologies and ideas that have commercial potential. Also, the universities can signal to potential investors that they have valuable resources, and it is open to partnerships and collaborations by commercializing its intellectual rights. The other benefits of commercialization of IPR are to reduce unemployment and boost economic development. When universities in Sri Lanka commercialize their intellectual property rights, they can create new business opportunities and industries based on their research findings⁸. Also, commercializing IPR creates new jobs and develops the high-tech industries. Therefore, it is obvious commercializing IPR contributes to the overall economic development of the country.

5.0 The Current State of IPR Commercialization in Sri Lankan Universities

However, Sri Lanka confronts some challenges regarding the commercializing IPR, such as, lack of resources, awareness and infrastructure. While some universities have made efforts to commercialize their intellectual property, there is a need for a more coordinated and strategic approach to maximize the

⁸ Nisansala, A., 'Commercializing University Research Outcomes: Sri Lankan Experience' <http://viduketha.nsf.gov.lk:8585/slsipr/PR6752/PR6752-163.pdf> accessed 15 July 2024.

impact of these endeavors on the economy⁹.

6.0 Commercialization of IPR in Sri Lanka Universities

The commercialization of intellectual property rights (IPR) owned by universities in Sri Lanka plays a critical role in the country's economic development. The benefits of transforming research outcomes into profitable products and services are creating innovative business, jobs, and export opportunities. It is necessary to analyze the methods by which Sri Lankan universities commercialize their IPR. These include: Licensing: universities have the ability to grant licenses to produce and sell products or services based on their research discoveries. This strategy can be considered to commercialize IPR in industries as software, pharmaceuticals, and biotechnology. Spin-off companies: Universities can help to create spin-off companies to commercialize their IPR. Spin-off companies are typically founded by researchers or entrepreneurs who are passionate about developing and bringing new products or services to market¹⁰. Partnerships with industry: Universities and companies often align to conduct research and development projects together. As a result of this alliance, it supports accelerating the commercialization process and decreases the risk for both parties.

7.0 Intellectual Property Policies in Sri Lankan Universities

If Universities in Sri Lanka enact robust intellectual property policies, it can efficiently commercialize IPR. These policies should outline the procedures

⁹ Ferdinands, R., 'Does It Matter Who Owns It? A Comparison Study and Demographic Profiling of Patent Ownership and Its Impact on Commercialisation in Sri Lanka' <https://www.scirp.org/journal/paperinformation?paperid=120895> accessed 15 July 2024.

¹⁰ R Ferdinands, 'Does It Matter Who Owns It? A Comparison Study and Demographic Profiling of Patent Ownership and Its Impact on Commercialisation in Sri Lanka' <https://www.scirp.org/journal/paperinformation?paperid=120895> accessed 15 July 2024.

for identifying, protecting, and commercializing intellectual property generated within the university¹¹. In Sri Lanka, some of universities implemented policies like that. Also, there is room for improvement in terms of their comprehensiveness and alignment with international best practices.

8.0 Challenges in IPR Commercialization

Several challenges hinder the commercialization of IPR in Sri Lankan universities such as: Limited Awareness: There is a lack of awareness among university staff and researchers regarding the value of intellectual property and the commercialization process. Inadequate Resources: Universities often lack the necessary resources, including funding, technology transfer offices, and specialized personnel, to support IPR commercialization efforts. Legal and Regulatory Barriers: Complex legal and regulatory frameworks can impede the timely and cost-effective protection of intellectual property. Industry Collaboration: Limited collaboration between universities and industries hampers the transfer of technology and knowledge into the marketplace. Risk Aversion: Risk aversion within universities may discourage entrepreneurial activities and the establishment of spin-off companies¹². In Sri Lanka, an inclusive plan should be developed to promote the commercialization of IPR. Also, this plan should have potential to address various aspects, including legal frameworks, funding mechanism, industry collaboration, and capacity building. The following actions can be followed to avoid the above difficulties:

¹¹ Abeysekera, I., 'Intellectual Capital Reporting between a Developing and Developed Nation' (2007) 8 *Journal of Intellectual Capital* 329 <https://doi.org/10.1108/14691930710742871> accessed 15 July 2024.

¹² Ravi, R., 'Factors Affecting Technology Transfer and Commercialization of University Research in India: A Cross-Sectional Study' <https://link.springer.com/article/10.1007/s13132-021-00747-4> accessed 15 July 2024

Strengthen Legal Frameworks:

Review and update existing IPR laws and regulations to ensure they are aligned with international standards and best practices, introduce specific legislation or amendments to enhance the protection and enforcement of university-owned IPR, establish specialized IPR courts or tribunals to expedite legal proceedings related to IPR disputes and provide clear guidelines on the ownership, licensing, and transfer of university-owned IPR¹³.

Establish Technology Transfer Offices:

It is significant to establish Technology Transfer Offices to transform research outcomes as profitable goods. And this office should consist of skilled and knowledgeable staff, such as technology transfer experts, legal advisers, and business development professionals. The staff's key responsibilities should identify, protect, and university owned IPR. Moreover, it is needed to promote cooperation and knowledge sharing among Technology Transfer Offices through national networks or consortia.

Create Funding Mechanisms:

Establish a dedicated fund to support the commercialization of university-owned IPR, either through government allocations or public-private partnerships, offer grants, seed funding, and venture capital specifically for IPR-driven start-ups and spin-off companies, Facilitate access to international funding opportunities for university researchers and entrepreneurs and Encourage collaboration with private investors and industry partners to provide financial support for IPR commercialization efforts¹⁴.

¹³ Ferdinands, R., 'Does It Matter Who Owns It? A Comparison Study and Demographic Profiling of Patent Ownership and Its Impact on Commercialisation in Sri Lanka' <https://www.scirp.org/journal/paperinformation?paperid=120895> accessed 15 July 2024.

¹⁴ Ravi, R., 'Factors Affecting Technology Transfer and Commercialization of University Research in India: A

Promote Industry Collaboration:

In order to promote industry collaboration, the universities should promote strong ties between universities and industries. This collaboration will help to facilitate technology transfer and commercialization. Furth more, this collaboration between academia and industry, will provide benefits to both academia and industry. As a result of that, both parties are able to gain and create innovation. In order to create innovations, universities should establish industry-specific innovation hubs or technology parks to attract companies. Additionally, university researchers also can meet potential companies through networking events, conferences, and workshops.

Enhance Capacity Building:

Enhancing capacity building is a significant method to boost the commercialization of IPR in Sri Lankan Universities. To develop the commercialization process of IPR, it is essential to organize training programs and workshops for university researchers and faculty. Those programs help them how to transform their ideas into profitable goods. Also, the university can encourage students and researchers to explore commercialization opportunities by promoting entrepreneurship education programs within universities. It is also important to organize mentorship programs; these programs help to connect experienced entrepreneurs and industry experts with university inventors. Because this partnership will provide special training to the university researchers.

9.0 Universities in Sri Lanka and Their Best Practices in IPR

Despite these obstacles, there are some successful stories regarding IPR commercialization in Sri Lankan universities. For an instance, the University of Colombo and Moratuwa organized innovation programs and

Cross-Sectional Study' <https://link.springer.com/article/10.1007/s13132-021-00747-4> accessed 15 July 2024.

centres to enhance the commercialization in Sri Lanka. The centre that was established by the University of Colombo is “Innovation and Enterprise Development Centre”. This centre helps support innovation and entrepreneurship among its students and the faculty. Another example is that the University of Moratuwa succeeded in inventing renewable energy technology. According to the above instances, it is clear that the universities are capable of contributing to economic development of the country through IPR commercialization. There are numerous programs to promote commercialization of IPR owned by universities of Sri Lanka, those are establishment of the National Intellectual Property Office (NIPO) and the National Science Foundation (NSF). The NIPO provides support to universities on IPR matters, while the NSF provides funding for research and development projects. It is obvious that, universities have contributed to Sri Lankan economy growth by commercialization IPR. Due to the commercialization of IPR, universities help to create new businesses, reduce unemployment, and enhance export trade, improve the balance of payments, and make the country more resilient the external shocks. Following examples discuss how the Sri Lankan universities has contributed to the country’s economic development by commercialization of IPR. The University of Moratuwa has developed several innovative technologies that have been commercialized by private companies. These include technologies for the production of coconut charcoal briquettes, the extraction of biodiesel from waste cooking oil, and the development of low-cost prosthetics¹⁵. The University of Peradeniya has developed several new medicinal plant varieties, which have been licensed to private companies for commercial cultivation. These varieties have generated millions of dollars in export revenue for Sri Lanka¹⁶. The University of Colombo, by parting

¹⁵ Ravi, R., ‘Factors Affecting Technology Transfer and Commercialization of University Research in India: A Cross-Sectional Study’ <https://link.springer.com/article/10.1007/s13132-021-00747-4> accessed 15 July 2024.

with private companies, was able to develop several software applications. Moreover, these applications gained recognition by business and organizations all over the world.

10.0 Impact on Economic Development

10.1 Contribution to Technology Transfer Due to commercialization process technology facilities have transformed from universities to industries. Sri Lankan industries can benefit from access to cutting-edge research and innovation, leading to the development. This can enhance the competitiveness of local industries on a global scale.

10.2 Entrepreneurship and Start-up Ecosystem The commercialization of IPR encourages the emergence of vibrant entrepreneurship and start-up. The role of universities as incubators for innovative start-ups, creating jobs and fostering a culture of entrepreneurship among students and researchers. Therefore, it is apparent that commercialization of IPR owned by universities can address youth unemployment and drive economic growth.

10.3 Job Creation and Skill Development The establishment of spin-off companies and the growth of technology-intensive industries can lead to job creation in high-skill sectors. Additionally, universities can offer training and skill development programs related to IPR management and entrepreneurship, preparing students.

10.4 Attracting Foreign Investments Commercialization of IPR owned by universities can provide many benefits to Sri Lanka. One of the benefits is to attract foreign investments and partnerships. Also, it is significant to notify that the investors like to collaborate with universities and invest in Sri Lanka, if they believe that the country can provide them with a welcoming framework and protection for IPR

¹⁶ The University of Moratuwa, Criterion 8: Innovative and Healthy Practices. <https://uom.lk/efac/qac/criterion-8-innovative-and-healthy-practices> accessed 15 July 2024

commercialization.

11.0 Recommendations for Enhancing IPR Commercialization in Sri Lankan Universities

To effectively harness the economic potential of university-owned IP in Sri Lanka, certain measures can be taken such as:

IP Policy and Infrastructure: Universities should develop comprehensive IP policies that outline ownership rights, procedures for protection, and guidelines for commercialization. Additionally, establishing dedicated technology transfer offices and incubation centres can support the process of IP commercialization.

Funding and Support: Government agencies, private sector entities, and international organizations can provide financial assistance and support programs to universities for IP commercialization. This funding can be used for patent filing costs, market research, feasibility studies, and business development.

Collaboration and Networking: Encouraging collaboration between universities, industry, and research institutions promotes knowledge exchange, facilitates technology transfer, and enhances commercialization prospects. Networking events, technology showcases, and industry-academia partnerships can build strong relationships and foster a culture of innovation and entrepreneurship.

Legal and Regulatory Framework: Ensuring a robust legal and regulatory framework that protects IP rights and provides efficient mechanisms for resolving disputes and enforcing contracts is crucial. This framework should strike a balance between incentivizing innovation and safeguarding the public interest¹⁷. To gain the full potential of IPR commercialization in Sri Lankan universities and its impact on economic development, it is significant to follow the below recommendations.

Strengthening University-Industry Collaboration

Universities and industries often collaborate in order to identify research areas of mutual interest. Also, it

¹⁷ Thalagala, C., 'Enforcement of Intellectual Property Rights in Sri Lanka: Some Issues' (2012).

is needed to promote technology transfer between the universities and the industries. The strength of the alliance can be enhanced by collaboration agreements and research partnerships.

Capacity Building and Training

To promote successful IPR commercialization and enhance knowledge and skills, universities should invest in capacity building. Also, it is significant to organize training programs for their staff and students on IPR management, entrepreneurship, and technology commercialization.

Policy Reforms and Incentives

In order to establish a conducive IPR commercialization environment, the Sri Lanka government should analyze and refine existing intellectual property policies and regulations. Further, to enhance IPR commercialization activities, it is significant to offer tax incentives and grants. These steps will encourage universities to engage more in IPR commercialization.

Intellectual Property Awareness Campaigns

Awareness campaigns should be conducted to educate university stakeholders, researchers, and the public about the importance of intellectual property and its potential economic benefits and these campaigns can help change attitudes towards entrepreneurship and innovation¹⁸.

12.0 Conclusion

Based on the information provided, it is evident that the Sri Lankan universities play a vital role in the commercialization of intellectual property rights that they own. Further, their contribution to economic development of Sri Lanka through the commercialization of IPR are valuable. It is true

¹⁸ Abeysekera, I., 'Intellectual Capital Reporting between a Developing and Developed Nation' (2007) 8 *Journal of Intellectual Capital* 329 <https://doi.org/10.1108/14691930710742871> accessed 15 July 2024.

that there are some challenges that exist in the commercialization of IPR. However, despite the obstacles, there is an abundance of unexplored possibilities in the form of innovations and inventions generated within academic institutions. If Sri Lankan universities implement prudent strategic manoeuvres and address the challenges that discussed in this paper, they can become significant contributors to economic growth. Additionally, they can reduce unemployment rate and promote technological advancement in Sri Lanka. The success of IPR commercialization in Sri Lankan universities will benefit to the institutions and contribute to the broader economic development of the country. To achieve this goal, it is significant for universities to collaborate with government bodies and industries. This collaboration can enhance innovation, entrepreneurship, and the responsible management of intellectual property.

ACKNOWLEDGEMENT

I would like to express sincere gratitude to all the individuals whose contribution is undeniable in making this particular project or practicum successful.

References

- Abeysekera, I., 'Intellectual Capital Reporting between a Developing and Developed Nation' (2007) 8 *Journal of Intellectual Capital* 329 <https://doi.org/10.1108/14691930710742871> accessed 15 July 2024.
- Erstling, J., 'Heinonline' (1991) <https://heinonline.org/HOL/LandingPage?handle=hein.journals/sljinl3&div=6&id=&page=> accessed 15 July 2024.
- Ferdinands, R., 'Does It Matter Who Owns It? A Comparison Study and Demographic Profiling of Patent Ownership and Its Impact on Commercialisation in Sri Lanka' <https://www.scirp.org/journal/paperinformation?paperid=120895> accessed 15 July 2024.
- Mendis, P., 'Integrating Intellectual Property into Innovation Policy Formulation in Sri Lanka' https://www.wipo.int/edocs/pubdocs/en/wipo_report_inn_lk.pdf accessed 15 July 2024.
- Nisansala, A., 'Commercializing University Research Outcomes: Sri Lankan Experience' <http://viduketha.nsf.gov.lk:8585/slsipr/PR6752/PR6752-163.pdf> accessed 15 July 2024.
- Ravi, R., 'Factors Affecting Technology Transfer and Commercialization of University Research in India: A Cross-Sectional Study' <https://link.springer.com/article/10.1007/s13132-021-00747-4> accessed 15 July 2024.
- Thalagala, C., 'Enforcement of Intellectual Property Rights in Sri Lanka: Some Issues' (2012).
- The University of Moratuwa, 'University of Moratuwa' (n.d.) <https://uom.lk/efac/qac/criterion-8-innovative-and-healthy-practices> accessed 15 July 2024.
- University of Sri Jayewardenepura, Intellectual Property Policy (IP Policy) (2020) Nugegoda: Vidudaya Publications of University of Sri Jayewardenepura <https://cqa.sjp.ac.lk/wp-content/uploads/2021/01/Policy-on-Intellectual-Property-min.pdf> accessed 15 July 2024
- Webster, A. and Rappert, B., 'Regimes of Ordering: The Commercialization of Intellectual Property in Industrial-Academic Collaborations' (1997) <https://doi.org/10.1080/09537329708524274> accessed 15 July 2024.

Zielgar, N., Ruether, F., Bader, A. M., and Gassmann, O., 'Creating Value through External Intellectual Property Commercialization: A Descriptive Capacity View' (2013) 38 Journal of Technology Transfer 930 <https://ideas.repec.org/a/kap/jtecht/v38y2013i6p930-949.html> accessed 15 July 2024.