

The Intrapreneurship and University's Support to Enhance Commercialization Capabilities

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Abstract

The purpose of this study was to determine the impact of intrapreneurship and the university's support on academics' commercialization capabilities at USU. The sample for this study was active lecturers at the University of North Sumatra who have conducted research of as many as 83 people. This research employs a quantitative descriptive method. This study used path analysis to determine whether intrapreneurship has a positive and significant effect on the university's support, whether intrapreneurship has a positive and significant effect on commercialization capabilities, and whether university's support has a positive and significant effect on commercialization. The significance of this research is that commercialization is critical for the effective use of research findings.

Keywords : Intrapreneurship, University's support, Commercialization

1. Introduction

The business environment changes rapidly, as evidenced by the shift in nature of the business environment from local to global. Higher Education must create competitive advantages both internally and externally to adapt to changing business environments so competitors cannot easily imitate. Higher education operates in uncertain times, necessitating a proactive approach to addressing current global challenges. Innovation is one strategy for meeting existing global demands. This is in accordance with the obligations of academics in higher education, particularly at the University of North Sumatra, namely the Tri Dharma of Higher Education, which consists of education, research, and community service. It is expected to develop sustainable, usable, and beneficial products

for society. The University of North Sumatra implements intrapreneurship as a strategy for fostering innovation and creativity by better utilizing the entrepreneurial abilities of academics. When intrapreneurship is strengthened and empowered, it not only promotes innovation and creativity but also enables academics with innovative ideas to apply company resources to create superior products. Additionally, it is applicable to businesses and is beneficial to the industrial world and society. Academics can be empowered to act as change agents in Higher Education by fostering an intrapreneur culture. Academics feel comfortable presenting novel ideas and are empowered to promote their implementation. Thus, the implementation of intrapreneurship can help to improve higher education's performance. The

primary contribution of intrapreneurship orientation is to raise awareness and understanding of entrepreneurship's role in revitalizing and performing an existing organization, increasing appreciation for the success of intrapreneurs and new corporate ventures, and better understanding entrepreneurial organizations (Antoncic and Hisrich, 2003). While organizational innovation focuses on product, technology, and administrative innovation, intrapreneurship focuses on emerging activities and orientations that reflect product innovation habits or those associated with technological innovation.

In the context of higher education, successful commercialization is the process by which research ideas or findings are transformed into property or wealth for individuals, communities, and businesses. Successful commercialization generates revenue through monetary and intellectual property licenses, as well as consulting work (Zhao, 2004). However, compared to the industrial world, most universities have been relatively inactive in the commercial application of science (Lee et al., 2012). The reason is that academics commercialization efforts are more complicated than those of their industrial counterparts because juggling academic responsibilities and business activities is challenging (Aziz et al., 2012; Perkmann et al., 2013; Salter et al., 2014).

Generally, there is a disconnect between academic research and industrial needs. On average, less than 1% of research products generated by Indonesian higher education institutions are patentable, and not all of them are commercially viable. As such, universities must be capable of facilitating technology transfer. Higher education is responsible for transforming research findings into commercially viable products, transforming ideas and discoveries to

generate jobs and prosperity (Harman and Harman, 2004).

Formulation of the problem

Does intrapreneurship orientation affect the commercialization capability of academics at the University of North Sumatra, which is moderated by the university's support?

2. Literature review

2.1 Intrapreneurship

According to Princhott (1985), an intrapreneur is someone who focuses on innovation and creativity and who transforms a dream or idea into a profitable business that he operates within the scope of the corporate environment. Employee intrapreneur character development requires a paradigm shift from conventional work patterns, which only wait for instructions and direction from the leader, to a more proactive, innovative and goal-oriented work pattern.

2.2 Commercialization

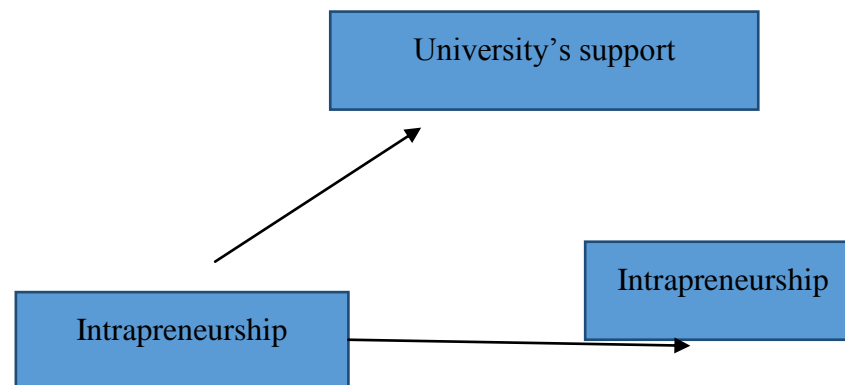
Transferring research products to the market presents a unique set of difficulties. For instance, while universities have much potential for commercialization activities, agricultural research indicates that farmers are not easily convinced to consider using technology developed by higher education (Yaakub et al, 2011). In general, research activities at the tertiary level have received widespread recognition (Candell & Jaffe, 1999). Higher education is critical to a country's development. The College is a center of discovery and creativity, one of the numerous contributions to the generation and transfer of knowledge, including the system. In an open and tolerant environment, ideas can be shared and discussed. Higher education institutions possess expertise in various fields, establish relationships with stakeholders from the

regions in which they operate, conduct research and training, and lay the groundwork for a country's social, cultural, economic, and technological advancement. To gain recognition, higher education institutions have become more autonomous, entrepreneurial, and focused on research (Masyy, 1996).

2.3 University's support

Ismail et al (2016) stated that the university's support led to an increase in commercialization capabilities. The assistance may take the form of funding, policies, or the establishment of research institutions. According to Harman and Harman (2004), the University can enhance its commercialization capability by allocating necessary resources, enforcing intellectual property policies, conducting research, and making consultations available. Universities must be able to develop a strategy that stimulates and facilitates increased technology transfer to business and society, according to Batterham (2000). According to Harman and Harman (2004), additional university's supports that can significantly boost commercialization capabilities include educational and awareness programs for academics about the intellectual property registration process, assisting academics with patent and intellectual property rights registration and costs, identifying potential industrial partners, and assisting academics with obtaining funding.

Conceptual framework



Hypotheses

- H1: Intrapreneurship has a positive and significant effect on the university's support
- H2: University's support has a positive and significant effect on commercialization
- H3: Intrapreneurship has a positive and significant effect on commercialization
- H4: University's support mediates the relationship between intrapreneurship and commercialization

Research Methodology

Population

The population in this study were active lecturers at the University of North Sumatra who had conducted research under the Talenta USU program of as many as 504 research titles.

Sample

Proportional random sampling was used as the sampling technique. Primary data collection occurred via direct distribution of questionnaires and email. This study surveyed 83 respondents.

Definition of Operationalization Variables

Intrapreneurship Orientation (X) is raising awareness and understanding of the role of entrepreneurship in revitalizing and

performing an existing organization, increasing appreciation for the success of intrapreneurs and new corporate ventures, and comprehending entrepreneurial organizations. Indicators: autonomy, innovation, risk-taking, proactive and competitive aggressiveness.

Commercialization Capability (Y) refers to how research ideas or findings are converted into property or wealth of individuals, communities and businesses. Successful commercialization of revenue forms ranging from income to consulting work. Indicators: Industry involvement for idea/technology development, collaboration with customers or end-users, expanding the benefits of idea/technology for services, developing ideas/technology through commercialization agents, building partners for idea/product development, supplying or selling products to retailers or marketplaces.

University's support (Z) is university's support that encourages increased commercialization capabilities. The support provided can be in the form of funding,

policies, the existence of research institutions. Indicators: Funding (research incentives), University Policies, Research Institutions (Research Consulting), Facilities, Infrastructure.

Data Collection Methods

In this study, researchers used 2 methods: (1) Distributing Questionnaires. (2) Documentation Study, a method of collecting data through books, journals, magazines, and the internet, supporting reference material for researchers.

Results and Discussion

Path Analysis

The analytical method used in this research was path analysis. Path analysis was used to test the significance of the indirect effect of intrapreneurship orientation on commercialization capability, through university's support. Table 4.5 presents the results of the path analysis test.

Table 4.5 Path Analysis Testing Resultss

Influence	Path Coefficient	Sig.	R-Square
X -> Z	0.579	0.000	0.336
X -> Y	0.275	0.015	
Z -> Y	0.387	0.001	0.349

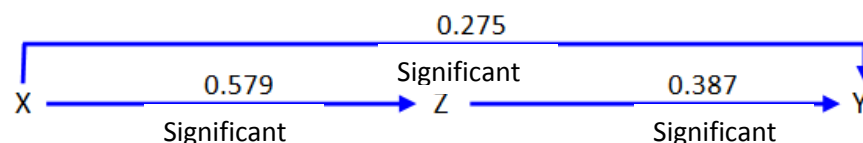


Figure 4.3 Path Analysis Test Results

Based on the results of the path analysis test in Table 4.5, it is known:
Hypothesis Test

H1. Intrapreneurship orientation has a positive effect on university's support
The path coefficient value is 0.579. It is known that the Sig value is 0.000 < 0.05, so it is concluded that intrapreneurship

orientation has a positive and significant effect on university's support.

H2. Intrapreneurship orientation has a positive effect on commercialization capabilities

The path coefficient value is 0.275. It is known that the Sig value is $0.015 < 0.05$, so it is concluded that intrapreneurship orientation has a positive and significant effect on commercialization capabilities.

H3. University's support has a positive effect on commercialization capabilities

The path coefficient value is 0.387. It is known that the Sig value is $0.001 < 0.05$, it is concluded that university's support has a positive and significant effect on commercialization capability.

H4: University's support mediates the relationship between intrapreneurship and commercialization

Through the university's support, the indirect effect of intrapreneurship orientation on commercialization capability is $0.579 \times 0.387 = 0.224$.

The influence of Intrapreneurship orientation on university's support

This finding corresponds to the research of Cillo et al (2015), leadership and governance: entrepreneurship is a major part of the university strategy, which could have specific objectives for entrepreneurship with associated performance indicators such as generating entrepreneurial motivation, cognition, and attitudes. Organizational capacity, people and incentives: the university's entrepreneurial objectives are supported by a wide variety of funding sources/investments, including investment by external stakeholders. The goal is to bring internal stakeholders together (staff and students) and build synergies. Entrepreneurship development in teaching and learning: University is structured in such

a way to stimulate and support the development of entrepreneurial mindsets and skills; universities wish to be entrepreneurial in their approach, teaching and promoting diversity and innovation in all departments. University - business / external relationships for knowledge exchange: the university is committed to collaboration and knowledge exchange with industry, society and the public sector, and it demonstrates active involvement in partnerships and relationships. It specifically supports staff and student mobility between the academia and the external environment and it links research, education and industry related activities.

The findings above suggests that the intrapreneurship spirit of lecturers who conduct research thus far arises not out of a desire to contribute something useful to the world of education, but out of a desire to obtain something from the university in the form of facilities, benefits, or promotion. Indeed, much of it is done for the lecturer's personal benefit. Thus it is still uncommon to find research conducted by multiple lecturers that is the most recent discussion and reference for the business world in general.

The influence of intrapreneurship orientation on commercialization capabilities

This finding is also in line with the studies conducted by Alexander, 2012; Rosenbusch, Rauch, and Bausch 2013; Sianbola et al., 2011. This article contributes to the body of research on internal or corporate entrepreneurship by emphasizing the role of this type of entrepreneurial behavior in innovation management and technology commercialization.

Considering the research findings that intrapreneurship orientation has a positive

and significant effect on commercial capabilities, it is clear that the research conducted thus far should focus on outputs that can become new ideas, theories, or sources of knowledge, particularly for the development of social sciences, particularly economics and business. This is possible if the lecturer's research is of high quality. However, suppose the quality factor is not a significant factor in determining the feasibility of a study becoming a scientific study; in that case, the research will serve only as a prerequisite for commercializing the lecturer's material and position, not for commercialization in the world of business and economy that can be used by society and businesses.

The influence of the university's support on commercialization capabilities

According to Azoulay et al (2007), many research-oriented universities have actually become more proactive in commercializing innovative knowledge and technologies. Technology commercialization refers to a university's various commercial usages of intellectual property (IP), such as patents, copyrights and research publications, including selling or licensing IP to firms for commercialization and internal use of IP (Carayannis et al (2015), Qian et. al (2018)).

These findings demonstrate the university's critical role in ensuring the quality of research to benefit its enormous commercialization capabilities. This means, university as the institution that houses all of the lecturers' scientific activities, must conduct rigorous screening of the research produced by the lecturers, both in terms of the research's content and the impact of the study on the world of business and economy, society, and country.

As a result, universities must be more selective in providing financial support and facilities for research in order to determine whether the research will have a future commercialization impact on the community's economic life.

The University's support is a mediating variable between intrapreneurship and commercialization

Intrapreneurship orientation has a significant effect on university's support and university's support has a significant effect on commercialization capability, so it is concluded that university's support is significant as a mediator of the relationship between intrapreneurship orientation on commercialization capability. In other words, intrapreneurship orientation indirectly and significantly affects commercialization capabilities through university's support.

The results of this study indicate that to foster a spirit of intrapreneurship, especially lecturers to conduct quality research as one of the tri dharma of higher education, they must receive full support from the university both in financial support as well as supervision and assistance to the research process. This means that the university's role, from the initial research approval to the final assessment of the quality of the research aids, is the key to the success of the valuation capability process. So that universities should not make the quantity of research that increases from year to year as the success indicator, but more importantly, the quality of the research must be more important than just the amount of research produced. Because the spirit of intrapreneurship within the university environment is actually how the lecturers who carry out research do their best to do research that is beneficial to the world of

economics and business, which becomes users in applying theory and scientific studies resulting from the study. The university should stop the spirit of intrapreneurship that is directed to only making as much research as possible as the demands and obligations that must be fulfilled by the lecturers, without considering the quality and benefits of the research.

The r-square value of university's support is 0.336. This value can be interpreted as the intrapreneurship orientation that can explain/influence the university's support by 33.6%. Meanwhile, the r-square value of commercialization capability is 0.349, which means that intrapreneurship orientation and university's support are able to influence commercialization capability by 34.9%.

Conclusion

1. Intrapreneurship orientation has a positive effect on the university's support
2. Intrapreneurship orientation has a positive effect on commercialization capabilities
3. The university's support has a positive effect on commercialization capabilities
4. The university's support mediates the relationship between intrapreneurship and commercialization

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