

Achieving Research University: Indonesian Case

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Abstract. Today many universities have the vision to become a research university, including in Indonesia. It is based on the desire to play a role in advancing science for the benefit of humanity as well as to enhance the university reputation at the international level. However, in the case of Indonesia, it can only be done by several universities, given the large number of universities with very different capabilities. In addition, another problem is human resources, infrastructure, and research funding. Various targets indicator used to determine its success include the number of publications, patents and industrial products. There is an urgent need to improve all factors that can accelerate the increase in research in Indonesia universities, and has been started by the policy of the current government.

Keywords: research university, Indonesia, government policy

1. Introduction

Rapid development of higher education is currently happening around the world [1][2]. Changes in the form of a university education in the past become a research university is not inevitable. The public demands of university is not only producing graduates but also expected to provide new alternative findings of the research. The fast development of lifestyle demands a new technology capable of meeting those needs [3]. University and industry partnership is very important and play important role in this matter [4][5].

These conditions make the universities transform itself into a research university that is able to produce the technology needed by the community. Furthermore, changes continued after a research university and then apply knowledge and become an entrepreneur university [6]. This development is increasingly affecting many universities in the world, including in Indonesia.

This brief paper discusses the state of research universities in Indonesia. Given that there are still many obstacles faced in order to become a research university, it will also discuss what policies are needed to support the development of research universities in Indonesia.

2. Development of university in Indonesia

Indonesia has several types of higher education institutions, those are university, institute, polytechnic, college, academy, and community college. University is higher education institutions that produce



graduates in various fields up to the doctoral level. Institute is also institution of higher education which only on specific field up to doctoral level, while college also has specialized field, but only up to bachelor level. Polytechnic is a higher educational institution that produces diplomas in various fields up to Diploma level 4, while the academy only to the Diploma level 3 on specific field. For a community college that has recently been developed in Indonesia, only up to Diploma level 1 or 2.

All universities in Indonesia initially were intended to produce graduates with degree or diploma. Its main target is to produce people who are experts in a particular field as much as possible with a good quality according to the needs of society and the market. Based on the development of higher education in the world, several major universities and institute in Indonesia began to transform themselves into research universities[7]. However, considering the real situation of universities in Indonesia, only a few are able to run the process as well as a research university.

The number of universities in Indonesia is currently more than 4,000 institutions. This number is very large, but has not been able to accommodate all existing high school graduates annually. Most universities in Indonesia are private, only about 300 are state university. The ability and capacity of these universities is very different both in financial, management, infrastructure, the number of students and professors, as well as other things are concerned.

3. Constraints research university

To become a research university, it takes the ability and adequate institutional capacity. Research universities require various aspects that are not easily met by universities in Indonesia. Being a successful research institutions not only need financial capabilities, but also support human resources and infrastructure facilities [8]. On top of that, there is a need to have good management in higher education management for its sustainability [9], with university strong and visionary leadership[10].

Initially, Indonesian government giving financial support to public universities only, because the existing rules do not allow the state to help private institutions. Therefore, private universities should seek their own funding from both student fees and from other businesses. Currently, the government has begun providing assistance to private universities, with methods permitted by the rules and regulations in Indonesia. For example, the government has been providing a wide range of research funding schemes may be accessed by anyone, from both public and private universities. However, given that government funds are limited, the support given to college do not meet all of the needs. Therefore, to become a good research university, generally financial constraints being faced by these universities.

In terms of infrastructure, the general conditions of all the universities are very different. Even among public universities was also not the same. Several universities in the top 10 in Indonesia, is generally adequate and able they are expected to develop into a research university. However, laboratory and other supporting facilities at the university also need to be improved, as well as other universities. On the other hand, some major private university established by large companies, generally have adequate infrastructure. Some universities also have a laboratory facility, but still needs improvement.

Among all universities in Indonesia today the availability of human resources with high research ability has not been evenly distributed. The number of researchers who holds a doctor or professor is still small. On the other hand, research universities require human resources with high research capabilities. They must also be able to follow the development of science through articles published in good scientific journals in order to develop cutting-edge research topic

4. Necessary policies

To support the increase of nation competitiveness, the universities have to work hard in order to carry out cutting edge research to deliver the products required by the community and the market. Research and education is the main foundation of the progress of a nation[11]. It is necessary for the central and local government policy, in addition to college policy to encourage the performance of research at each university.

In regard to financial policy, consistency is required of the central government in allocating research funds to universities. Allocation of funds should be given to universities on a competitive basis to produce good research results based on the criteria of a good proposal. The central government should have specific targets of those funded universities. Currently the central government, through the Ministry of Research Technology and Higher Education has set a target of 7 + 1 field of research, namely the areas of food, renewable energy, health, transportation, information technology and communication, defence and security, materials, and maritime. It takes courage for the central government to focus on the few universities that has been able to become a research university grow faster with the allocation of special funds with specific targets.

Government policies are needed to be able to encourage some universities selected through the allocation of special funds for the development of the infrastructure necessary for the development of research. In general, some universities have had the basic infrastructure that has can be used for research, but for certain things required special infrastructure.

In order to improve the ability of the existing human resources, it is also required special government policies to encourage this. Among others is by providing scholarships to students who have the ability to develop research and education levels. Related to this, the government has provided many scholarships, for example through the program LPDP. To enhance the experience of Indonesian academics to conduct research, government policy is needed to provide an adequate and flexible funding to develop research collaboration with other researchers from developed countries. Accelerate the recruitment of human resources who have the capacity and capability of high research also must be implemented immediately.

5. Conclusion

Improving the ability of universities in Indonesia in the research development, the central government policy is needed in particular to improve the competitiveness of the nation. The policy is primarily in financial assistance for the implementation of research, development of infrastructure and improvement of human resource capability.

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