Designing an Entrepreneurial University Model With Social Cognitive Theory Approach

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ABSTRACT
This study aimed to examine the proposed entrepreneurial university model that is relevant to the changing times. A number of studies on the entrepreneurial university model have been conducted. This study used social cognitive theory that underlies the entrepreneurial university model. The method used in this study was literature study by discussing a number of studies on entrepreneurial universities. The proposed entrepreneurial university model comprises the input, process, and output approach. During the process, there are three factors focused, namely personal factors, behavioral factors, environmental factors and technology. The implication of this research is to provide an alternative model that can be applied to the development of entrepreneurship in universities, although in essence, each university requires a different approach according to its environment.

Keywords: entrepreneurial university model, social cognitive theory

1. INTRODUCTION
The term entrepreneurial university has been known since 1997 as written by [1]. There are two concepts of entrepreneurial university, which are academic entrepreneurship and entrepreneurial education [2]. Academic entrepreneurship focuses on commercializing the results of research, while entrepreneurial education focuses on strengthening entrepreneurial competencies for students and faculty. Entrepreneurship development in universities faces a number of obstacles, such as the taboo of the public sector commercialization, complicated bureaucracy, and research results that cannot be directly utilized by the public.

Indonesia has programmed the widespread development of entrepreneurship in 2011 for no less than 13 ministries program related to the development of entrepreneurship, including universities [3]. University entrepreneurship programs are such as establishing an entrepreneurial center and carrying out student entrepreneurship programs. Entrepreneurship program organized by the government has not yet synergized, so it seems that each of them has implemented the program without a comprehensive grand design [3]. In order to get a better understanding, Indonesia needs to see the entrepreneurship development in other countries, such as in Malaysia. [4] examined the entrepreneurship program at universities in Malaysia. Based on the research of [4] only five universities set entrepreneurship as the main program at both the undergraduate and post-graduate level, out of 21 universities that were the object of research. Learning methods are considered to be still conventional, not enough to prepare the students to become entrepreneurs. Suggested by [4], entrepreneurial learning must pay attention to the needs of each individual, develop the collaboration with partners, both government and private institution, using the entrepreneur's role model as part of the learning process.

2. LITERATURE REVIEW

2.1 Theories Explaining the Entrepreneurship

2.1.1 Entrepreneurship based on the Theory of Planned Behavior

The most widely used theory to explain the entrepreneurial interest is the Theory of Planned Behavior (TPB) developed by [5]. Based on TPB, the entrepreneurial interest in a person is influenced by behavioral attitudes which means that the stronger (positive) individual assessment of whether or not the impact of being an entrepreneur will strengthen the individual's desire to work independently (self-employed) or to run his / her own business. In this case, the stronger the attitude towards entrepreneurship, the stronger the interest to be an entrepreneur.

The weakness of TPB is only emphasizing the aspects of attitude or personal factors and ignoring the contextual factors. According to [6], the research on entrepreneurial interest should also involve the contextual factors, besides the socio-demographic factors and one's attitude factors,
because these three factors form an integrated whole in the entrepreneurial interest research model. The results of research that support the entrepreneurial interest were also influenced by external or environmental factors carried out by [7], who concluded that experience influences entrepreneurial interest.

2.1.2 Entrepreneurship based on Social Cognitive Theory (SCT)

The assumption of SCT is that human beings have high flexibility who can learn various skills. SCT also assumes that human beings have control in their lives. In the context of entrepreneurship, SCT shows the interaction of internal aspects of individuals and the environment in determining the entrepreneurial interests. One internal aspect of an individual that indicates entrepreneurial interest is the risk-taking propensity. Risk-taking propensity reflects a person's ability to handle uncertainty and willingness to take risk of loss. Based on [8], the higher the risk-taking for one's propensity, the higher the entrepreneurial intentions of the person will be.

Personal, environmental and individual behavior factors affect each other's entrepreneurial interests as evidenced by the conclusions of [9], whereas entrepreneurs are more willing to take the risks because of the experience, so that they are able to measure these risks. Besides the habit of dealing with uncertain environmental situations, it drives him or her to take the risks in order to get a chance.

2.2 Entrepreneurial University Model

A number of studies have examined the entrepreneurial university model, including [10], [11] and [12]. [10] proposed the entrepreneurial university model as follows:

Fig. 1. Entrepreneurial University Model [10]

The stages towards entrepreneurial university starts from the input, which are organization and environment. The input is processed through a learning orientation, collaborative network and entrepreneurial orientation, so that it can produce the output. In contrast to [10] who proposed an entrepreneurial development model based on a process approach in organizations, the proposed entrepreneurial university model in this article emphasizes more on the learning process associated with organizations. [11] proposed a model of entrepreneurial activity and an entrepreneurial development model for students. Entrepreneurial activities for students are real-business work lectures, alternative student work and internships in small and medium businesses. Universities can program the training, practice, apprenticeships and business assistance with the basis of science and technology. It is expected that student activities and institutional programs can produce new entrepreneurs to realize an entrepreneurial university. [11] further illustrated the entrepreneurial spirit development model. Entrepreneurial spirit for lecturers can be formed through teaching, doing research and exercising community service activities of higher education with a curriculum that supports and engages in the business world. [13] explained that there are two factors that influence the success of entrepreneurial university, which are formal and informal factors. Formal factors that determine the success of an entrepreneurial university include entrepreneurial courses, technology, support measures for start-ups, industry links, incubator-science parks and flexible organizations with good governance. The success of an entrepreneurial university is also determined by the informal factors, namely the attitude of students, favorable academics, entrepreneurs who become role models, cultural values, reward systems and ways of teaching. These formal and informal factors will influence activities at the university, in terms of teaching, research and entrepreneurship programs.

Fig. 2. Entrepreneurial University Model [13]
The entrepreneurial university design according to [12] is as follow:

![Entrepreneurial University Model][12]

**Fig. 3.** Entrepreneurial University Model [12]

### 3. DISCUSSION

The model of entrepreneurship development process in university collaborates with the results of a number of studies conducted by [10]; [11]; [12], [13] and [14].

![Entrepreneurial University Model – Input, Process, and Output][12]

**Fig. 4.** Entrepreneurial University Model – Input, Process, and Output

For more details, at the stage of Process, it can apply the social cognitive theory modification. The development model that refers to social cognitive theory supports the entrepreneurial university design of [12], whereas the entrepreneurial university is built from three main pillars, namely regulative pillar, normative pillar, and cognitive pillar. The model of entrepreneurship development process can be seen in Figure 5.

![The Model of Entrepreneurial University Process – Social Cognitive Theory Approach][12]

**Fig. 5.** The Model of Entrepreneurial University Process – Social Cognitive Theory Approach

Personal factors that need to be considered at the stages of the entrepreneurship development process are risk profile, self-confidence, locus of control, and optimism. Behavioral factors that need to be considered in the process of developing entrepreneurship are skills, competencies, and hobbies. Personal factors and behavioral factors need to be supported by the environment and technology. [14] concluded that personal factors like risk and loss-averse affect entrepreneurial intention. Environmental and technological factors are in the form of role models, mentoring, industrial support and technology utilization. Novice entrepreneurs who are classified as small and medium entrepreneurs experience some limitations in terms of capital, inability to conduct research and development,
and the required technology in entrepreneurship [15]. According to [16], many students conduct business activities by using online business. The application of technology in entrepreneurship among SMEs will encourage the application of innovation in the aspects of product innovation, process innovation, organization and management innovation, and technology innovation [15]. Institutionally, the university can establish a business incubator. Business incubator is an organization that systematically creates new entrepreneurs and provides business development assistance for beginners. [17] concluded that there is a number of factors that influence the success of a business incubator, namely, the ability of business incubator, governance, recruitment criteria, exit criteria, mentoring and networking, funding and support, university regulations and infrastructure. Entrepreneurial learning needs to be redesigned by applying the concept of learning in the field. By experiencing in the field, students will experience successes and failures to become entrepreneurs. The experience of successes and failures and supported with the knowledge of entrepreneurship increases self-confidence and the ability to deal with risk. Comprehensive entrepreneurial learning can collaborate on the process of learning, research, community service and student activities.

4. CONCLUSION

The strategy for developing a university towards an entrepreneurial university is different for each university. This is in line with [2], who stated that each university has a different orientation depending on the environment. This study aimed to propose an entrepreneurial university model based on social cognitive theory, while implementing rapidly the developing technology. The implication of this research is to complete the entrepreneurial university model that has been developed since 1997. It is expected that this proposal can provide an alternative to developing entrepreneurship in the world of education. This study has limitations, because it is still at the stage of literature study. This proposal needs to be tested in order to find out its effectiveness. Future researchers can also develop more concrete programs to be implemented.

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