

Strategy for Strengthening Business Incubators in Higher Education Startup Assistance: Case Study of Unesa Business Incubator



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ABSTRACT: This study aims to analyze the problems and constraints of Unesa's business incubator (PIBT) implementation in university startup assistance and to formulate Unesa's business incubator strengthening strategy in university startup assistance. This study uses a quantitative and qualitative approach. Data collection used questionnaires to the university academic community (Unesa) and in-depth interviews with several key persons who understand the development of university startups and business incubators. The study results show that the implementation of assistance for university startups (Unesa) is not optimal because there are still a few in the academic community who have the awareness to make efforts to commercialize their innovative products or conduct research toward product commercialization. For incubators, various reinforcements are needed to assist tenants and implement pre-incubation and incubation. Strengthening agencies in providing higher education startup assistance, such as coaching (BMC, Business Plans and Marketing Strategies) and assisting startups to obtain funding or investor.

KEYWORDS: Incubator business, entrepreneurship, strategic, assistance, management

I. INTRODUCTION

Business incubators are agencies or institutions that function in providing facilities and infrastructure facilitation as well as business development services both in the management and technology spheres for newly growing companies (Startups) and small and medium enterprises (SMEs). The purpose of this facilitation and service is for Startups and SMEs to improve and develop their business activities so that they can develop into strong entrepreneurs with competitive products, and also the provision of facilitation and services is carried out by incubators within a certain period of time.

One of the services provided by an incubator is business assistance or entrepreneurial incubation which helps startups to move from the first (initial) stage of implementing their business to the stage of releasing startups that are considered healthy and will survive (develop and not die) when the incubation is complete. Incubation itself is one of the incubator's programs which consists of intensive assistance, mentoring with industry partners, coaching skills, business meetings, to exhibitions. There are even several incubators that also provide other facilities in their incubation such as startup funding. Before incubation is carried out, startups will usually enter the pre-incubation process where programs in pre-incubation such as prototyping assistance, assistance in finding business networks, business permit assistance, product trial assistance, etc.

The big difference between the Pre-Incubation stage and the Incubation stage is in the level of product technology readiness (TKT). The product at the time of Pre-Incubation was still in the form of a prototype that had to be tested such as market trials and manufacturing trials with the aim of obtaining data on whether the product was feasible for commercialization. Then, if the product successfully passes the pre-incubation stage, it will then enter the incubation stage with the programs as previously described. Only when the incubation stage has been carried out, and the startup is considered to have passed the incubation stage, can they proceed to the post-incubation stage.

The facilities provided by the incubator both in terms of assistance or facilitation of facilities and infrastructure make the incubator an important institution for the development of strong and superior new entrepreneurs. The same is true of business incubators which have been developed by universities, local governments and the private sector with various approaches and goals. University business incubators usually have the goal of being able to develop startups within universities that have

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research-innovative products to be commercialized. With the existence of a business incubator, it is hoped that tertiary institutions will be able to implement these research-based innovation products so that they don't just stop at prototypes..

This was also carried out by the Technology Business Incubator Center (PIBT) – Surabaya State University LPPM which had been established since 2016 starting with the establishment of the Entrepreneurial Incubation Center and Job Center (PIWJ) which later changed its name to the Technology Business Incubation Center (PIBT) in 2019 PIBT Unesa has a program every year to revive entrepreneurship within the university. In particular, PIBT Unesa has a program every year to be able to realize the commercialization of innovative research products in the scope of universities, one of the ultimate goals of which is to create income generating for the university. Moreover, currently Surabaya State University is trying to welcome PTN-BH (State University with Legal Entity).

According to the Regulation of the Minister of Cooperatives and Small and Medium Enterprises (2013), the stages in organizing an entrepreneurial incubator consist of at least:

- a. pre-incubation which consists of recruiting prospective tenants, basic training to recruit prospective tenants, and finalizing technology ideas and ideas to be commercialized;
- b. incubation consists of making written contracts with tenants, training and skills development, guidance, consulting, mentoring, production processes, production trials, marketing, exhibitions, business meetings, and business administration; and
- c. post-incubation consists of completing incubation contracts, building networks with alumni tenants, monitoring and evaluating tenant business developments for at least 2 (two) years, and providing consultancy (PERMENKOPUKMRI Nomor 11/Per/M.KUKM/XII/2013, 2014).

With these regulations, the business incubator at the University strives to implement every process with the aim of creating an incubator that has optimal service. However, practice in the field is not always in the same sequence or not all are always implemented. This is due to the many internal and external obstacles in program planning, budgeting, program implementation, to reallocation of activities so that not all of the points in the stages above can be implemented properly. Therefore, the incubator needs to develop the right strategy in strengthening the incubator program and assisting its tenants.

Quoting from Lalkaka (2002) "Growth has been very rapid, and what the world needs now is not just more incubators, but improved ones. Counting the numbers of incubators is a hazardous task, as the definitions vary markedly from country to country. Also, the situation is dynamic while information flows are sporadic. Interestingly, while incubators in industrial countries serve a variety of objectives, those in industrialising nations are predominantly focused on technology. It should be noted that incubators nurture entrepreneurs who create enterprises, of which some would, after leaving the incubator, create direct and indirect employment, with incomes and assets that in turn contribute to economic growth."(Lalkaka, 2002)

Based on Lalkaka's statement above, the very rapid growth of technology at this time requires incubators to be better in their implementation, not only are there more and more in number and also specifically said that the special functions of incubators between countries are different and dynamic. Then most of the industrialized countries are focused on technology.

This study aims to devise a strategy to strengthen Unesa's Technology Business Incubator Center (PIBT) in assisting startups within the academic community at Surabaya State University in order to realize the commercialization of research-invasive products so that they can bring in addition to generating income to the university, also succeed in accompanying startups to succeed in creating companies that after graduating from incubation, they can create direct and indirect employment, have income and assets so that they can contribute to economic growth. This research was conducted by analyzing existing external factors, namely the academic community. This is in accordance with the opinion of Vanderstraeten (2015) which states that services that respond to consumers are a very important mediation so that business incubators can focus on increasing the resilience and success of their tenants (incubation participants). (Vanderstraeten et al., 2016).

II. METHODOLOGY

The research was conducted at PIBT in Surabaya, East Java, which is one of the centers under the Institute for Research and Community Service (LPPM). The research design is descriptive qualitative. Qualitative descriptive research is making factual and actual observations that occur in the real world and then examining the behavior of both individuals and groups and studying, explaining a phenomenon naturally without any intervention from outsiders. Respondents in this study were Unesa academics, especially researchers from lecturers and students.

The research data is primary data and secondary data and then analyzed using the strategic management concepts approach. Primary data was obtained through questionnaires which were then processed and analyzed to determine the right strategy. Secondary data was obtained from internal institutions, organizations or related ministries, journals, and related research results

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which then formulated a grand strategy by describing how efforts to develop strategic management in strengthening business incubators in startup assistance at Surabaya State University.

III. RESULTS AND DISCUSSION

A. Knowledge of Business Incubators

Based on the questionnaire that was conducted and filled out by 259 respondents from the academic community (lecturers and students), knowledge about business incubators was focused on whether the respondents knew about Unesa's Technology Business Incubator Center (PIBT), the benefits or objectives of Unesa's PIBT, and Unesa's PIBT work program . Regarding respondents' knowledge of Unesa's PIBT, the results showed that 71.04% or as many as 184 respondents already knew what Unesa's PIBT was, while 28.96% or as many as 75 people did not know what Unesa's PIBT was. This shows that quite a number of respondents already know about Unesa's PIBT. This is certainly a good start for determining a strategy to strengthen startup assistance because the academic community is considered quite educated about what a business incubator is. However, out of 259 respondents, only 64.48% or 167 people knew the benefits or purposes of Unesa's PIBT as a business incubator and 35.52% or 92 other people did not know the benefits or purposes of Unesa's PIBT. These results show that almost half of the respondents know the benefits or purposes of Unesa's PIBT. Of course, this is quite a concern for Unesa's PIBT-LPPM to be more active and aggressive in providing education and outreach about Unesa's PIBT so that the selection of startup candidates can be maximized and evenly distributed.

As many as 241 people or 93.05% of respondents agreed that efforts to change the research mindset towards an entrepreneurial mindset as a basis or initial step for product commercialization for Higher Education Startups need to be carried out and increased by PIBT Unesa. This also made 241 respondents agree or 93.05% that changing the research mindset towards an entrepreneurial mindset as the basis or initial step for product commercialization for university startups needs to be done periodically every year. As many as 246 people or 94.98% of respondents also agreed that so far the incubator has provided optimal service in assisting product commercialization to the academic community. This shows that almost all respondents agree that so far incubators have been considered optimal in carrying out their services in assisting product commercialization. In addition, it also shows that respondents are aware of the importance of the entrepreneurial spirit as a basis for the emergence of Higher Education Startups so that Unesa's PIBT can use this data as a reference for formulating mentoring implementation strategies as an effort to foster an entrepreneurial spirit within Unesa's academic community.

Further measurement of respondents regarding their knowledge of their Unesa PIBT by asking their views on one of Unesa's PIBT work programs in 2022 as a form of Higher Education Startup assistance. The level of knowledge is measured by asking whether one of Unesa's PIBT work programs, namely conducting proposal mentoring roadshows to every faculty at Unesa, product commercialization funding workshops, and exhibitions, is deemed to have supported the commercialization of researchers'/lecturers' products/services. The results showed that as many as 180 people or 69.5% of respondents said one of Unesa's PIBT work programs, namely conducting roadshows on proposal assistance to every faculty at Unesa, product commercialization funding workshops, and exhibitions, was deemed to have supported the commercialization of research/lecturer products/services while 79 people or 30.50 % says otherwise. This can be interpreted that Unesa's PIBT needs to conduct a study of its monkey program as an effort to improve the performance of Higher Education Startup assistance. Based on the results above, a matrix table can be made as follows.

Table 1. Knowledge and View of PIBT Unesa

No	Pertanyaan	Ya	Tidak	Yes (%)	No (%)
1	Know and Get to Know the Business Incubation Center which is one of the centers in LPPM Unesa	184	75	71,04%	28,96%
2	Do you already know about the purpose of PIBT LPPM Unesa as an effort to commercialize research products at Unesa?	167	92	64,48%	35,52%
3	Is changing the research mindset towards an entrepreneurial spirit mindset the basis or the first step in product commercialization?	241	18	93,05%	6,95%
4	Does step point 3 need to be carried out by the incubator to the academic community periodically every year as an incubator program to increase the commercialization of research products?	241	18	93,05%	6,95%

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5	Has the incubator provided optimal service so far in assisting the commercialization of products to the academic community?	246	13	94,98%	5,02%
6	Does Unesa's PIBT work program (proposal mentoring roadshow to each faculty, product commercialization funding workshops, and product innovation exhibitions) support the commercialization of products/services for researchers/lecturers?	180	79	69,50%	30,50%

Based on the data above, it can be concluded that almost the entire academic community is familiar with the Business Incubation Center which is one of the centers in LPPM Unesa. However, not everyone in the academic community knows about Unesa's PIBT, fewer respondents know the benefits or objectives of Unesa's PIBT, so a strategy is needed to be able to educate every Unesa citizen, especially research lecturers and students regarding Unesa's PIBT and its benefits or objectives. It can also be concluded that almost all respondents agreed on the need for a work program that focuses on changing the mindset of researchers to have an entrepreneurial spirit and the work program is carried out periodically considering that there is a regeneration of students every year indicating the potential for continuous startups. As well as respondents agree that this slema PIBT Unesa has provided optimal service in assisting the commercialization of products to the academic community, but the results of the questionnaire show that almost half think that some of the incubator work programs in 2022 are considered not optimal in supporting the commercialization of products/services for researchers. This can be an evaluation and preparation of strategies for the coming year.

Based on the data analysis above, the grand strategy that can be developed by PIBT Unesa is compiling a work program with a combined focus, namely introducing PIBT and its benefits for the academic community (lecturers/students) then continuing with advanced program activities such as bootcamps by recruiting startup candidates to grow entrepreneurial spirit in researchers (lecturers/students) in the academic community.

B. Product Commercialization Readiness

After we know about the level of knowledge of the Unesa academic community regarding Unesa's PIBT above, another factor that needs to be studied is how the readiness of the commercialization of research products in the scope of Higher Education is concerned. Measurements were made to find out: 1) the number of research products available at Surabaya State University; 2) enthusiasm or desire of researchers to commercialize their products and constraints in the process; 3) factors constraining the commercialization of research products such as IPR (intellectual property rights), licensing or standardization, and soft skills of human resources for startup candidates; and 4) respondent's enthusiasm for several assistance options offered by the incubator such as assistance in preparing funding proposals, licensing registration, product exhibitions, marketing, and financial management. The results of respondents' answers to these questions can be seen in the following table.

Table 2. Response to the readiness of product commercialization

No	Pertanyaan	Yes (%)	No (%)
1	Do you have research products that can be commercialized?	22%	78%
2	Do you as a researcher have the desire to commercialize the product?	32%	68%
3	Do you experience any problems in commercializing the product?	66%	34%
4	Is carrying out product intellectual property rights (patent/trademark registration) one of these obstacles?	66%	34%
5	Is carrying out Product Standardization and Licensing one of these obstacles?	49%	51%
6	Is the mastery of Design Thinking (ideas and proposals) one of these obstacles?	53%	47%
7	Is preparing a mature business plan in an integrated manner (creating Business Model Canvass and Business Plans), one of the obstacles before competing in the free market?	75%	25%
8	Are Marketing campaigns and building consumer loyalty (market expansion), including one of the obstacles before competing in the free market?	76%	24%
9	Do you want assistance in preparing commercialization proposals?	75%	25%
10	Do you want assistance with the registration of commercialization permits?	69%	31%
11	Do you want product exhibition assistance?	63%	37%
13	Do you want marketing assistance?	73%	27%
14	Do you want financial management assistance?	63%	37%

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Based on table 2 above, it shows that only about 20% of respondents have research products that can be commercialized, while the desire to commercialize products increases to 30%, which we assume is that 10% of respondents who do not have commercialized products have the desire to be able to commercialize them. product. This cannot be completely ignored because this amount can be an opportunity for a startup as well. Apart from that, the data above shows that every researcher in higher education actually also wants to be able to commercialize the product of his research. Then for various existing obstacles, preparing a mature business plan in an integrated manner (creating Business Model Canvass and Business Plans and Marketing campaigns (building consumer loyalty / market expansion) is the highest as an obstacle for Startups before competing in the free market. So in overcoming this Incubators need to be responsive in developing strategies to strengthen mentoring by compiling work programs that focus on providing Business model canvass (BMC) training, Business Plans, and Marketing Campaigns for the academic community, especially researchers (lecturers/students) with innovative products. received by respondents based on data is assistance in preparing commercialization proposals and assistance in product marketing. These two assistances have been carried out by PIBT Unesa on an annual basis which this year has been carried out with assistance in funding proposals leading to commercialization and development exhibition of innovative products. However, that does not mean that the evaluation does not need to be carried out by the Unesa PIBT.

Based on the data analysis above, the strategies that can be implemented by PIBT Unesa to overcome the level of product commercialization readiness on the marketing assistance side are implementing continuing the annual incubator exhibition work program every year by developing it or adding to the business meeting program where the incubator acts as a bridge to bring together startups with potential investors or industry partners, as well as improving the quality of web service commercialization of LPPM Unesa which has been carried out with a total development of 531 books, 33 technology products, 11 Health and Medicine products, 10 Culinary products, 6 Clothing (Fashion) products, 4 Application & Software Products , 4 TTG, 3 Robots, and 2 Automotive with a total of 604 research products by increasing the progress of products that can be linked to Tokopedia, of which there are currently 13 products.

Furthermore, looking at the data above, it can be seen that many products still need to be incubated. PIBT Unesa itself already has a matrix regarding its incubation services which are composed of Pre-Incubation, Incubation and Post-Incubation which will be provided by incubator tenants during the incubation period which are described as follows:

Table 3. Incubation Service IBT Unesa

INKUBASI (MIDDLE TERM/SECOND YEAR)			
No	Activity	Description of Activity	Implementation Time
BUSINESS ACCOMPANIMENT			
1	Provision of Tenant Companion	One companion is intended for one tenant who will provide assistance	Beginning of incubation/when tenants enter
2	Technical and Management Training	Coaching Business on how to develop tenant skills and knowledge, so that performance improves, and leads to goal achievement	First month of incubation
3	Business Consulting	the assistance of an expert (consultant) to solve problems faced by tenants, and help tenants formulate business strategies, operating strategies and future development.	Second and third month of incubation
4	Mentoring	share experience and knowledge from someone who has experience in a particular field	Fourth month of incubation
5	Training and Workshops	mechanism for transferring skills / abilities to training participants in the areas of financial practice, financial recording and reporting.	Fifth month of incubation
6	Training and Workshops	mechanism for transferring skills/capabilities to training participants in practical areas of building quality management systems, leaderships etc	Sixth month of incubation
7	Mentoring	Business strategy advice	Seventh month of incubation

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8	Mentoring	Technology ad	Eighth month of incubation
9	Mentoring	Product Development	The ninth month of incubation
10	Intellectual Property Rights Registration	Directions from the incubator to register the intellectual property rights of their business products	The ninth month of incubation
11	Branding	incubator product branding	Tenth month of incubation
12	Promotion	Product exhibitions are held regularly by the incubator	April and August
NETWORKING AND COLLABORATION			
13	Regular Business Meeting	Inviting several potential companies to work with tenants to view tenant products	April and August
14	Business Matching	Bringing together tenants and prospective partner companies by the incubator	Eleven months of incubation
15	Business Partnership with Entrepreneurs	Creating MOUs/tenant cooperation with third parties	Eleven and twelfth month of incubation

Based on table 3 above, it can be seen that there is a need for further study of the incubation process based on the request of Higher Education Startup candidates (researchers). The strategy for strengthening business incubators in assisting higher education startups, especially PIBT Unesa, can be carried out by combining the results of the latest research data obtained regarding the urgent needs of Surabaya State University Startups with the incubation service program that has been prepared by PIBT Unesa. So far, the grand strategy that can be carried out by PIBT Unesa is to strengthen agencies in providing higher education startup assistance such as compiling activity programs that can foster the entrepreneurial spirit of researchers (lecturers/students), coaching Business Model Canvass (BMC), coaching Business Plans and Marketing strategy and assistance for startups, especially for obtaining funding as capital, either grants or investors, as well as providing assistance in marketing university startup products

CONCLUSIONS

The implementation of business incubation in strengthening Higher Education Startup assistance still experiences various challenges in the implementation of incubation. Strategies to strengthen business incubation can be carried out through strengthening agencies in providing higher education startup assistance such as compiling activity programs that can foster the entrepreneurial spirit of researchers (lecturers/students), coaching Business Model Canvass (BMC), coaching Business Plans and Marketing Strategies as well as mentoring Startups, especially for obtaining funding as capital, either grants or investors, as well as providing assistance in marketing Higher Education Startup products.

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