JSBET Journal of Social Business, Economics, and Technology

ISSN: XXXX-XXXX
Volume 1 Issue 1, March 2026

A Reflective Study on the University Incubation Centres for Indonesia Taking the Experiences of Developed Countries

*[1]Nisa Novia Avien Christy, [2]Kirya Mateeke Moses, [3]Radna Andi Wibowo
[1]Faculty of Economics, Semarang University, Semarang, Indonesia
[2]Graduate School of Technological and Vocational Education National Yunlin University of Science and Technology, Taiwan
[3]School of Business, Woxsen University, Hyderabad, India

*Corresponding Author:
Email: nisa.novia@usm.ac.id

DOI:

ARTICLE HISTORY
Submit: January 2026
Published: March 2026

Page: 39-51

ABSTRACT

Despite recent growth, the prevalence of entrepreneurship in Indonesia remains relatively low compared to global standards and the benchmarks set by the World Bank. Recognizing that universities and their business incubators are pivotal instruments for economic advancement and social improvement, this study aims to analyze the experiences of University Incubation Centres (UICs) in developed countries to provide a reflective framework for Indonesian institutions. The research employs a literature analysis approach, utilizing content analysis of academic articles to examine the missions, policies, operational approaches, and service items of successful incubators in the United Kingdom, Singapore, and the United States. These nations were selected based on their historical significance, the volume of incubator programs, and their status as regional innovation hubs. The results indicate that successful UICs in these developed nations function as fundamental components of the entrepreneurial ecosystem, offering critical support such as office space, specialized mentoring, financial networking, and industry partnerships. Specifically, the study highlights how these incubators effectively transition research from laboratories to the market, generate high-wage jobs, and provide a high return on public investment. Synthetically, the primary missions of these centers revolve around specialized consulting, promoting start-up engagement, and facilitating external collaborations. In conclusion, the study offers specific recommendations for enhancing Indonesian university incubators. It suggests that incubators should be integral, on-campus organizations managed by full-time professionals rather than academic staff alone. Furthermore, to avoid conflicts of interest and maximize growth, universities should facilitate access to external funding rather than directly financing tenant companies, while ensuring strong linkages with technology transfer offices to expedite commercialization

Keywords: University Incubation Centres, Entrepreneurship, Economic Development, Indonesia, Incubator Management.

INTRODUCTION

Most universities in Indonesia develop an effective program supporting their students to become entrepreneurs. This is because they believe that entrepreneurial behaviour can be developed through entrepreneurship education. Therefore, these universities continually improve their entrepreneurship curriculum by integrating theoretical entrepreneurship concepts and practical contexts within such education (Permatasari & Agustina, 2018).

Indonesia's quantity of entrepreneurs has grown recently but is still relatively low as in many other developing countries. The entrepreneurship environment in Indonesia is restricted to only driving respective programs that insufficiency a comprehensive design. Hermanto & Suryanto (2017) and its policy has not been implemented optimally (Mirzanti et al., 2015) Although regulations associating with entrepreneurship exist, no government plans at the average level have been found to encourage entrepreneurship. (Mirzanti et al., 2015). The Global Entrepreneurship Monitor explained that only 1.65% of Indonesian entrepreneurs from a total population of 250 million people. In addition, the Global Entrepreneurship and Development Index, in 2014, ranked Indonesia at 68th out of 121 countries in the world. At the moment, the quantity of young entrepreneurs in Indonesia is only around 3% of the total population (Septyaningsih, 2020), still less than the standard from World Bank that a nation should have higher than 4% entrepreneurs from the total population within a country (Adhikusuma, 2020).

Universities have taken on new purposes and relations to provide economic progress and social improvement (Schmitz et al., 2017). Since the 1990s, economic growth has become essential for Universities, and incubator businesses from universities have attained influence as instruments that assist entrepreneurial activities correlated with economic increase (Budyldina, 2018; Etzkowitz, 2002; Etzkowitz et al., 2000). As a result, it is widely recognized that universities and their business incubator are crucial components of the entrepreneurial environment (Autio et al., 2014; Dahms & Kingkaew, 2016; Wright et al., 2017; Yang et al., 2018).

Astakhova et al., (2016) Stated that positioning education as a critical factor in economic and social development as the increasing role of skilled labour will increase the requirements for educational levels, accelerate the ageing process and decline in qualifications promote self-education and expand the scope of additional vocational training, in a rapidly developing knowledge economy, the role of intellectual work and reduce the importance of physical work, and the last, change of occupation takes too more time, educated people to spend less time looking for a new job.

Grimaldi & Grandi (2005), stated that incubator businesses are grouped into four kinds: The Business Innovation Centres, University Business Incubators, Independent Private Incubators, and Corporate Private Incubators. The primary purpose of the university business incubator is to assist new business ventures by providing various business support programs. A University Business Incubator is a dominant instrument in supporting a student to be an entrepreneur; this action deserves substantial attention to promote the economic advancement dimension of the nation while supporting business incubator and accelerator soundness and industry competitiveness. A University Business Incubator is described as a university-based organisation that gives support to young start-ups businesses through tangible and intangible services (Barbero, et al, 2012; Grimaldi & Grandi, 2005).

Xu (2009) offered a similar description to Barbero, Grimaldi and Grandi for university incubators, declaring that a university with an incubation system presents a physical space to promote university spinoffs. Therefore business incubators are an efficient way of searching for cooperation and creating networks that generate an added value. Roura (2015) defined that the university business incubators partnerships benefit entrepreneurs, students, universities, and incubators themselves. Entrepreneurs can serve from the well-prepared laboratories with computer systems provided by the universities and the well-trained human resources and experts in specific areas. On the other hand, students have the chance to achieve their acquired information in real

business cases, encouraging entrepreneurship among them by transferring technological advances and research outcomes to the market through commercialization channels, reinforcing links between university and business communities.

The universities in many developed countries such as the USA, UK, and Singapore have opened business centres, supported technological incubators and parks, and established specialized agencies that provide help and support to entrepreneurs. All these activities contribute to the development of the entrepreneurial society, where creative people can easily find their place for business and life. Thus, education is one of the key factors of economic development.

University in the United States is one example of a successful university incubator venture. Zablocki (2007), a specialist in the field of research administration at Buffalo at the State University of New York, presents the process of starting a business incubator. As stages of the preparation phase, which is a crucial part of the creation of an incubator, he distinguishes the following: the feasibility study, building support, identifying and securing stakeholders, and identifying a market niche.

The major purpose of this study to analyse the experience of Universities Incubation Centres in developed countries. This study, taking literature review approaches, focusing the previous experiences in some developed countries, mainly addresses the following issues: (1) The current university universities incubation centres in this global era; (2) The incubation centres in UK (Missions, policies, operational approaches, service items); (3) The incubation centres in Singapore (Missions, policies, operational approaches, service items, effects, and others); (4) The incubation centres in USA (Missions, policies, operational approaches, service items); (5) Synthetic conclusions of incubation centres in developed countries (Missions, policies, operational approaches, service items); and (6) Reflections and suggestions to incubation centres in Indonesian universities. Figure 1 is the framework of this research.

METHODOLOGY

This research adopted a literature analysis approach to addresses the recent incubation centres implemented in universities, focusing on the experiences in some developed countries, the missions, policies, implementation approaches, training programs and other crucial issues. The authors initially reviewed the related articles to understand the successfully incubation centres universities' by searching articles on the Web of Science under the topic keyword "universities incubation centres". Content analysis of a set of articles aimed to identify experiences of universities business incubations in United States, UK, and Singapore.

Figure 1. Conceptual Framework.

The author selected a United Kingdom incubator because first of all, UK was one of the first countries to establish incubators in Europe. In 1975, British Steel formed a subsidiary known as the British Steel Industry (BSI) to create jobs in steel closure areas (Aernoudt, 2004; Voisey et al., 2006). Secondly, The United States has the largest number of business incubator programs in the world. In many ways the U.S. has been a pioneer in this industry and the growth has been rapid from less than a 100 in the 1980s to about 1,800 in the 2010 (NBIA (2010). The United States has a much longer history of incubation and has served as a model for many countries engaging in this form of intervention to support new venture creation (Chandra & Chao, 2016). Both in the U.S. and in Europe, the business incubation concept evolved gradually. The first incubators appeared in the UK and in the USA and contributed significantly to regional economic development.

RESULTS AND DISCUSSION

The incubation centres in UK

Incubators have a positive impact on their tenant firm's survival and growth (Mian, 1994). The incubation stage focuses on supporting the launch of an actual company.

a. The Missions of Universities Business Incubation in UK

An explicit recognition of the client base at the outset and designing the programme accordingly might help in running the incubator more effectively in some cases. The incubator uses a niche market strategy, where the outcomes are sold to specific customers such as corporates only and not sold in general. The team in the incubator is tasked with identifying potential corporates to become regular customers of their products. According to Karatas-ozkan et al (2005), South East case appears to be an example of an incubator that falls in between the two approaches. However, the final case, Thames Inc, is a good example of a client-based approach. At the outset, the team identified the target customer group, which was corporate customers, and developed a sort of 'network incubator' to serve the needs of its corporate clients who were willing to embark on corporate venturing.

The Incubator Centre's mission is to support the university entrepreneurial talent development and commercialisation of new ideas; enhance the development of management capacity within the entrepreneurial ecosystem and beyond; and develop and share thought-leadership that establishes the University as a global knowledge locus for entrepreneurship.

b. The Service Items of Universities Business Incubation in UK

The support provided by the incubators varies, the main support entails access to the research facility and office space (Soetanto & Jack, 2016). The salience of managing the process of forming a university incubator with the capacity to provide the mechanisms and the means to give business support, advice and networking opportunities. Some of the inputs, such as human (i.e. a capable incubation team), physical (i.e. office spaces or labs) and social (i.e. relationships and networks) supplied as part of the process.

For smaller, denser spaces, incubators and accelerators are distinctive in their intensity of support. Co-working spaces share some similarities with incubators – in terms of physical set-up, some input-sharing, target clients and (non-competitive) entry. However, there is little or no active management, community curation, or provision of additional services. Intensity of support also helps differentiates incubators and accelerators from serviced offices aimed at established businesses: fully-fitted-out office buildings offering modular space (typically per room or per floor) where the emphasis is on sharing physical inputs. Of the less dense spaces, science parks facilitate the sharing of physical inputs both high end (university libraries, labs and researchers) and more mundane (meeting rooms, conference facilities and cafeterias). These also play a real estate role: helping firms flexibly adjust their commercial space usage, without undertaking costly re-location. Many parks also offer advice and may help manage companies. Industrial estates have important roles to play in providing space for urban manufacturing, logistics and

distribution, and for artists workshops (Wainwright, 2017). Here the emphasis is on input-sharing and flexible commercial space with little, if any, provision of support.

These 'start-up incubators' typically offer desk space, mentoring, access to professional services, networking, funding, events, and entrepreneurship training - often for free or at favourable rates. There is no one model for incubating new ventures, and universities today should seek to design a tailored programme of training and support that can meet the needs of their start-ups, innovators and entrepreneurs.

In addition to office space, the Start-up Incubator provides funding, commercial mentoring, negotiation support, desk space, and access to business networks. The Incubator has supported 47 ventures to date, of which 22 chose to incorporate, and 9 have now graduated and are running as established businesses. As of February 2016, Start-up Incubator ventures have cumulatively raised over £40m of investment.

c. The Policies of Universities Business Incubation in UK

In the UK, according to Lawton-Smith et al. (2005), government policy in relation to academic entrepreneurship involved three phases. The first phase ended the monopoly of the British Technology Group (BTG) over breakthroughs from publicly funded research in universities in 1983 (New Scientist 1983), along with the 1988 White Paper, DTI: Department for Enterprise (DTI 1988), signalled the government's willingness for universities to display more independence in the commercial exploitation of intellectual property generated by their staff. Hence universities were encouraged to create income for themselves and contribute to national wealth creation. The decentralization of technology transfer represented a turning point in the development of academic entrepreneurship in the UK. The second phase occurred in the early in the 1990s, the White Paper Realising Our Potential (DTI, 1993) led to the restructuring and privatization of the national scientific laboratories and marked a shift in science policy in favour of universities (Lawton-Smith et al. 2005). Finally, the third piece of the jigsaw came with the election of a Labour administration in 1997, which marked a shift towards a regional approach to innovation with the creation of the regional development agencies (RDAs) and a significantly higher priority given to the knowledge economy (DTI 1998)

d. The Operational Approaches of Universities Business Incubation in UK

University South West has a long tradition of promoting innovation and new ventures. In the mid-1980s, its successful Science Park was launched, which hosts its incubator. As argued in its official documents and the case study authored by one member of the incubation-management team, since its foundation the Park has contributed significantly to the economic development of the region with regard to technology transfer, as well as fostering innovation. Currently, it has tenant companies that employ over 2,500 staff, and many feed technologies into local companies with which they have partnering arrangements. Additionally, approximately two-thirds of the firms have links with the University, and a number of the University's spin-out firms are located within the incubator.

Having developed a successful track record of commercializing its research and numerous spin-out companies, University SW has developed its links and partnerships with similar institutions in the region. Such partnerships have resulted in a number of important new initiatives. One of them is the establishment of a pre-incubator located in the Research Park to facilitate the commercialization of research from both within and outside the University. Under a consortium bid to the HEIF, the pre-incubator is intended for use by nascent entrepreneurs with a sound business idea that links into the knowledge base of the University. At this new form of incubator, the businesses will be given the help and support needed to formulate a business plan and bring them to a stage when they are 'investment ready'. The substance of developing this new incubation programme also indicates the efforts made to formulate an exit strategy from the pre-incubator to the University's incubator, which is a more established one with a range of

services and facilities, and from there to the premises on the Research Park. As argued in the afore mentioned case study, it is intended that the university will retain links with the businesses as they grow and develop.

The Incubation Centres in Singapore

a. The Missions of Universities Business Incubation

Through the NUS Industry Liaison Office (ILO), The Nanyang University of Singapore's Enterprise underpin the university's force for business collaborations and cooperation in order to change university creation into goods as well services (NUS, 2020). Industry Liaison Office is in charge of handling NUS intellectual attributes, commercializing NUS intellectual properties, as well promoting the commercialization of NUS inventions and innovations. Promoting industry partnerships and engagement as well as close contact with research centres, and faculties, and driving dealing for outside collaborations, there are ways to achieve this commercial effect. ILO also assists NUS innovations and study in forming new start-up companies. This is accomplished through the ILO's facilitation of industry-promoted research as well joint R&D ventures.

NUS Enterprise supports and empowers the entrepreneur community. These types of behaviours are often activated in response to market trends. They serve as catalysts, encouraging others to join in order to support and expand the group, thus propelling them forward and cultivating awareness, as well as encouraging participants to adapt and react to the rapidly changing social enterprise landscape.

NUS Enterprise offers a wide range of resources to facilitate personals and businesses achieve their entrepreneurship goals, including incubator and accelerator programs that enable entrepreneurs to examine, share, and develop their concepts. It connects them with a vast network of experienced mentors and industry contacts. The Technopreneurship Centre, on the other hand, has as its primary objective the development of a regional R&D hub for innovation and entrepreneurship. The NTU is leading six projects as part of the S$250,000 NRF grant proof of concept initiative, demonstrating its significance in Singapore's search for innovative creation, concept, and entrepreneurship (Ng, 2012). NTU also plays a key role in two new programs. NTU wishes to cooperate with Ben-Gurion University of the Negev, two Israeli universities, and the Hebrew University of Jerusalem, to create solutions that improve energy effectiveness and minimize water waste. It's worth noting that the government's involvement to encourage innovation and entrepreneurship is very widespread, even at the organizational level.

b. The Service Items of Universities Business Incubation

Universities incubators provides extensive support services to entrepreneurs, including access to capital, committed mentoring, unique connections opportunities beyond the physical area, and support in integrating seamlessly into local ecosystems. (1) Equity-Free Grants; (2) Mentors & Advisors; (3) Master classes; (4) Downtown Co-Working Space.

c. The Policies of Universities Business Incubation

To organize entrepreneurship-related activities and projects, the Incubator collaborates closely with students, research centres, and other members of the university community. Universities incubators aims to add an entrepreneurial dimension to the university's education and research while also generating more economic benefit from the university's intellectual assets. It's a tech ecosystem creator and universal connection that catalysed and connected the start-up society while also launching new initiatives. It offers mentorship and opportunities for development in both local and global markets. This program embraces the spirit of creativity, cooperation, and partnership in every instance and place by leveraging each entity's unique expertise, the university's research resources and technologies, as well the partners' investment and business acumen encourage entrepreneurial ride throughout the regional geography and beyond.

Figure 2. The policies of UBI in Singapore

d. The Operational Approaches of Universities Business Incubation

In 2001, NUS Overseas College (NOC) was established with the aim of merging globalization and entrepreneurship. The fundamental idea behind the NOC program was to send entrepreneurially-spirit NUS students or graduate students to various entrepreneurial hotspots around the world for up to a year as interns in the high-tech technology business. They will also take entrepreneurship courses at collaborator higher education institutions in each of the territories. This program was essentially a trial in education about entrepreneurship by "immersion," or putting students as "apprentices" in high-tech start-ups or growth enterprises in international locations to expose them to the unspoken facets of foreign business culture and entrepreneurship.

This program's goal is to instil an entrepreneurial mentality in students rather than expecting them to start their businesses immediately after graduation. It will guide their potential research into commercially viable innovations and influence their career choices to encourage them to be more innovative and entrepreneurial. This program's goal is to help entrepreneurs in leading advanced technology hotspots abroad build valuable life-long social networks so that they are more likely to, ideally suited for, operating in, or initiating new advanced technology start-ups with global ambitions. (Wong et al., 2007).

The Incubation Centres in USA

a. The Missions of Universities Business Incubation

The mission of UCF Business Incubation Program is to help create and sustain higher-wage jobs in the community by helping businesses grow to the point where they need to hire employees in order to continue operating and growing. The University of Central Florida Business Incubation Program is a community resource that provides early-stage companies with the tools, training and infrastructure to become financially stable, high growth/impact enterprises. With seven facilities throughout the region, the UCFBIP is an economic development partnership between the University of Central Florida, the Corridor, Orange, Osceola, Seminole and Volusia Counties, and the cities of Apopka, Kissimmee, Orlando and Winter Springs.9The program's main goal is to help new and struggling early-stage businesses grow to the point where they need to hire employees in order to continue operating and growing.

Besides that, the mission of UF Innovate is building business on innovation. UF Innovate is the umbrella organization uniting the four entities that drive the innovation ecosystem at UF. Based at one of the nation's leading research institutions, UF Innovate comprises Tech Licensing, Ventures, and two business incubators, The Hub and Sid Martin Biotech. Together, those organizations move research discoveries from the laboratory to the market. UF Innovate connects innovators with entrepreneurs, investors and industry, incubates start-ups and growth companies, and fosters a resilient economy all in an effort to make the world a better place.

Tech Licensing has earned its reputation as a leader in commercializing discoveries that cure diseases, create efficiencies, improve quality of life and create jobs. Founded in 1985, Tech Licensing receives more than 300 invention disclosures, executes more than 100 commercial transactions and launches nearly 20 companies each year. In 2017, the Milken Institute ranked the University of Florida third in the nation for its tech commercialization efforts. With the benefit of UF Innovate's two business incubators and its Ventures organization, Tech Licensing connects researchers with investors and industry to lead them through the commercialization process.

b. Service items of Universities Business Incubation

In Jansen et al., (2015) explained that the incubator services at MIT are offered free of charge for current students and are not open to alumni. Incubators bring together entrepreneurs of start-ups in a similar life phase. This proved to be the single most important contribution of an incubator everywhere. Young entrepreneurs motivate each other, help each other out with common problems, and share each other's networks and resources. Experienced entrepreneurs that spend time at the incubator and share their experience and knowledge with their younger colleagues. At MIT, incubator services, such as free or subsidized office space, networking, and mentoring services.

The report of EBN-BIC (2009) presents a case study of Coventry University Enter-prise (CUE). As one of the largest university enterprise organizations in Europe and a wholly owned subsidiary of Coventry University, it employs more than 140 people directly within the field of business support, business incubation and technology transfer. It delivers business support to over 5000 businesses per year, offering an activity port-folio covering a broad spectrum from pre-incubation and incubation through to spin-off company formation and development, with internationalization business ad-vice. From its base at Coventry University Technology Park (CUTP), CUE offers a full and progressive package of office space and specialist facilities to new and growing businesses. It has provided incubation sup-port for the past 10 years.

The UCF Business Incubation Program provides client companies with the experience and insight needed to create successful companies through relationships it has created with its network of experienced entrepreneurs, professional service providers, economic development partners, small business service providers, university experts as well as a dedicated staff. Once again, the UCFBIP has demonstrated that it provides an extremely productive and efficient tool for creating and supporting quality jobs and economic activity for the Central Florida region and beyond. During a period of national economic recovery and robust growth, the UCFBIP has continued to be a job-producing "machine" bringing forth in the local economy a variety of businesses and employers that demonstrate sound management practices and potential for continued growth.

Opening in 1995, Sid Martin Biotech was one of the first bio-business incubators in the United States. The program fosters the growth of University of Florida-related start-ups by providing specialized equipment, wet labs, business mentoring, and introductions to prospective investors and service providers. The incubator generates $100 million in regional economic impact every year. Its start-up companies and graduates have attracted more than $1.7 billion dollars in equity investment, contracts, grants, and M&A activity.

Generally speaking, all facilities in these incubator universities are run by various types of boards with varying degrees of university, state, local government and private sector representations. The key elements of strategic considerations in operating a successful university incubators facility include: tenant selection policy, tenant graduation policy, intellectual property safeguards for tenant firms, and graduate firm-university incubators linkages.

c. The Policies of Universities Business Incubation

The UCFBIP helps Companies grow through (1) Coaching for Company Challenges; (2) Industry Immersion with Educational & Networking Events; (3) Maximize Your Profits with Finance & Accounting Help (assistance with budgeting, taxes, and reporting issues from recommended organizations); (4) Protect Intellectual Property; (5) Access to Legal Experts through maintaining relationships with a number of law firms have extensive experience working with start-up companies; (6) Curtail Office Operation Expenses by providing a business address, mail service, Internet connection and conference rooms through cost-effective office space with flexible leases. The UCFBIP and other business service providers review marketing and public relations strategies to enhance a company's public image; and aid in developing sales strategies and understanding the sales process.

In terms of management, UCF BIP provide site managers whose primary responsibility is to help the client companies become successful, daily manage the actual facility, help the clients with their upcoming questions, assist them with business connections/network, and introduce them to all the advantages of being part of the UCFBIP

d. The Operational Approaches of Universities Business Incubation

The UCF BIP helps early-stage businesses develop into financially stable companies by providing the tools, training, and infrastructure that help facilitate smarter, faster start-up growth. This comprehensive process includes an on-going series of strategic and tactical meetings, a variety a business development services, business coaching, and other important and unique resources that are all individually tailored to help emerging enterprises achieve their specific short-term and long-term goals. Most importantly, because incubation is an on-going process, follow-up and accountability are some of the intangible benefits that help take businesses to the next level. The UCF Business Incubation Program is a university-driven, community partnership between the University of Central Florida, the Florida High Tech Corridor Council, Orange, Osceola, Seminole and Volusia Counties, and the cities of Apopka, Kissimmee, Orlando and Winter Springs. During the last fiscal year, this publicly-funded program returned $12.03 for every $1.00 invested in the UCF Business Incubation Program.

UF Innovate | Sid Martin Biotech is a world recognized leader in biotechnology business incubation and with a well-equipped laboratories and specialized equipment plus an outstanding network of mentors, advisors and collaborators. Their leadership group has tremendous experience in business incubation, bioscience/technology management, finance and information technology. They assist firms in growing their therapeutic, diagnostics, medical device, ag-bio, clean energy and/or biopharma enterprise. They have been making growth happen in North Central Florida since 1995. The Sid Martin Biotech facility has quality laboratory space, conference/training rooms, animal facilities, greenhouses and over $1.5 million of shared scientific equipment.

UF Innovate | The Hub is a business incubator with a mission to build, drive and support the spirit of innovation. They are the "hub" of the North Central Florida entrepreneurial ecosystem with a global outreach. This offer state-of-the-art wet laboratory, light manufacturing and office space, along with advising, mentoring, education and programs and amenities to help you succeed. They have resident and affiliate programs available to assist every start-up and small business. Since the addition of the UF Innovate | The Hub, the entrepreneurial landscape and culture of Gainesville have experienced an amazing transformation, and the incubator is recognized as a major catalyst in helping propel the university city to become one of the top energized tech communities in the Southeast. Much more than a building, the Hub provides a complete growth ecosystem that leverages the prestige of the university's research and technology commercialization prowess and combines that with programming, resources and networking opportunities designed to support small start-ups and growth companies.

The UCFBIP is a personal trainer for companies; they help identify a company's specific business needs; provide coaching and a suite of business development services to help guide, motivate and support the company's efforts; and most importantly, help hold individuals accountable toward achieving the company's long-term goals. Clients get the resources they need to take their business to the next level, including affordable office space, legal assistance and educational events. Shared Services to Save Investment Costs are offered including shared office equipment (Fax, Laser Printer, and Copier), audio-visual equipment and other miscellaneous equipment

e. The Effects of Universities Business Incubation

The UCFBIP has enabled an innovation-centric entrepreneurial culture by developing a rich innovation and entrepreneurial ecosystem in the Central Florida region. Since its inception, the UCFBIP has been a catalyst for many entrepreneurial initiatives in the form of programs to interests and involve the faculty, student body, and local community in entrepreneurial activities by offering speaker series and graduate courses, developing business centres, hosting business plan competitions, etc.

The UCF Venture Lab (VL) was formed to provide preliminary support to companies that may not be ready for incubation. The VL helps assess ideas, develop business plans, and provide market research and other support to feed the ecosystem. The incubator has also developed a 4-week, 21-h course that functions as an application process for the incubator. It helps prepare potential client for the program and often will deter a client for entering the program if it becomes apparent that their business opportunity is not as attractive as they thought entering the course. The economic development pyramid is held up by a strong foundation of pillars provided for by the innovation and entrepreneurial ecosystem. These in turn enable world-class research which leads to intellectual property (IP) creation and management after which the next step involves the strategic development of the idea which is then commercialized into a product at the UCFBIP. As a result of this commercialization, jobs directly related to the products (primary jobs) and other (supplementary) jobs are created which in turn add to the overall economic development of the region.

f. The Training Programs of Universities Business Incubation

Since its formation in 1999, the UCFBIP has provided over 300 early stage companies with the enabling tools, training and infrastructure to create financially stable high growth/impact enterprises. With multiple locations across Central Florida, the UCFBIP is supported by a number of partners including city and county governments and the Florida High Tech Corridor Council. The regional economic impact study of the UCFBIP of July 2016 to June 2018revealed that the UCFBIP had 152 clients and 185 graduated clients as of June 30, 2018.TheUCFBIP clients through their operations have directly or indirectly sustained at least 6,725 full-time, permanent, high quality jobs within the central Florida regional economy. UFCBIP is a model for cooperative partnerships between the higher education system, local government, private enterprise, and a myriad of support agencies, and it accomplishes its mission by leveraging local public investment at a rate of more than $12.00 returned in local taxes for every $1.00 invested.

There are three separate programs, each designed to help businesses at different stages: (1) Pre-Incubation-helps create and launch scalable start-ups; (2) Incubation-helps scale businesses already in operation; (3) Soft Landing-helps companies headquartered elsewhere expand to Central Florida.

The University of Central Florida Business Incubator Network is integrated into an overall entrepreneurship ecosystem at UCF. Incubator and university staff aggressively support and promote incubator client–university partnerships to leverage available intellectual capital and promote technology transfer and economic development. As a result, numerous client

companies of the UCF Business Incubator Network license UCF intellectual property, conduct joint research with UCF faculty, and hire UCF students.

The UCFIBP has 107 clients which include professional services companies; IT/web companies; Engineering companies; Simulation/ Modelling companies; Environmental & energy companies; Education/Training; Biomedical/Health companies; Materials; Digital Media; Optics/Lasers and Telecommunications companies distributed in different locations such as Apopka, Central Florida Research Park, Downtown, Kissimmee, Life Sciences, Orlando, Photonics, Soft landing, Volusia county and Winter Springs.

Synthetic Conclusions of Incubation Centres in Developed Countries (Missions, Policies, Operational Approaches, Service Items, Effects, and Others)

Today, incubators have become a fundamental component in the modern entrepreneurial environment, strongly supporting the development of new businesses, through various approaches, in this global era. This study emphasizes the insightful understandings on University Business Incubators in developed countries and concludes the incubation centers are perceived as a crucial policy of higher education for economic growth. The author also analyzes the primary missions of university's business incubators and their incentive policies facilitating the engagement and partnership between universities and industries. Through the cooperation between universities and industries, the public sectors mutually reinforce and deepen social understanding, further develop professional networking, and broaden experts' involvement with intellectual attributes like that in the United States, UK, and Singapore.

Synthetically, Incubation Centres are established for the following primary missions: (1) University Incubation centres effectively offer specialized consulting services, and personnel training and coaching for entrepreneurs; (2) University Incubators proactively encourage start-ups to engage with one another in the culture of incubators, to support more people to cooperatively support the social development; (3) University Incubators are responsible to help early-stage business founders to ensure their product quality with financial support; (4) Promoting industry partnerships and engagement as well as close contact with research centres, and faculties, and driving dealing for outside collaborations; (5) Helping businesses grow to the point where they need to hire employees in order to continue operating and growing; and (6) Connects innovators with entrepreneurs, investors and industry, incubates start-ups and growth companies. This is study also concludes that the top programmes and services most frequently provided by the university incubators are to: (1) Provide office spaces, (2) Supervise other entrepreneurs with expertise, (3) Offer suggestive mentoring services to start ups, (4) Provide national and global networking facilities, (5) Organize interdisciplinary business plans with cooperation and competition, (6) Train personnel to enhance their business skills, (7) Integrate entrepreneurs and potential investors for market promotion, and (8) Provide necessary financial funding's.

CONCLUSION

To summarize, Indonesian business incubators should strive to emulate the best practices of some Singaporean universities and do everything possible to help their tenants accelerate their entrepreneurial processes. In order to be competitive, an incubator must extend its network and partner with successful government, funding agencies, industries, and universities. A business incubator must continue to improve the incubation process as a group activity. We believe that an incubator should serve as a platform for entrepreneurial learning as well as a gathering place for intellectuals to collaborate and connect. Researchers provide recommendations to policy makers and entrepreneurs in order to provide advice and encourage the implementation of incubator businesses, especially in universities in Indonesia: (1) The incubator should be an integral part of the university,

reporting to the President or to a Vice-President, in order to insure maximum cooperation with the academic and research faculty and students who are the continuing source of innovative ideas and new ventures; (2) The incubator should be located on campus to optimise networking, facilitate technology transfer and insure access to all university facilities and services; (3) The incubator should be directed by a full-time professional manager, with proven experience in starting or assisting new ventures and reputation in the community, in order to be able to network with government, community and academic peers; (4) The incubator should be a non-profit organisation, but may require subsidies for the first 2 or 3 years, and then should operate at break-even. If there is a surplus, rents and charges for services should be reduced. The reason is that start-up companies, in order to succeed, must invest all their cash in technology and marketing to grow faster than their competitors. Once the companies have reached profitability, they can reward the university with royalties, research contracts, donations, and/or revenue from equity; (5) The university should not participate in the funding of companies, which is outside its core competencies, and may cause conflicts of interest. Rather the university should facilitate local funding by government agencies, business angels and professional venture capitalists; and (6) The university should insist on close linkages between the incubator and the technology transfer office to expedite commercialisation.

REFERENCES

Adhikusuma, A. D. (2020). The Influence of Entreprenurial Culture in Indonesia Towards Business Students' A. *INTRODUCTION Entrepreneurship has become important role in economic development within a country*. *5*(1), 18–34.

Al-Mubaraki, H. M., & Busler, M. (2010). Business incubators models of the USA and UK: A SWOT analysis. *World Journal of Entrepreneurship, Management and Sustainable Development, 6*(4), 335-354.

Astakhova, K. V, Korobeev, A. I., Prokhorova, V. V, Kolupaev, A. A., Vorotnoy, M. V, & Kucheryavaya, E. R. (2016). The role of education in economic and social development of the country. *International Review of Management and Marketing, 6*(1), 53-58.

Autio, E., Kenney, M., Mustar, P., Siegel, D., & Wright, M. (2014). Entrepreneurial innovation: The importance of context. *Research Policy, 43*(7), 1097–1108.

Barbero, J.L., Casillas, J.C., Ramos, A. and Guitar, S. (2012). Revisiting incubation performance: how incubator typology affects results. *Technological Forecasting and Social Change, 79*(5), 888–902.

Budyldina, N. (2018). Entrepreneurial universities and regional contribution. *International Entrepreneurship and Management Journal, 14*(2), 265–277.

Dahms, S., & Kingkaew, S. (2016). University business incubators: An institutional demand side perspective on value adding features. *Entrepreneurial Business and Economics Review, 4*(3), 41–56.

Etzkowitz, H. (2002). Incubation of incubators: innovation as a triple helix of university-industry-government networks. *Science and Public Policy, 29*(2), 115–128.

Etzkowitz, H., Webster, A., Gebhardt, C., & Terra, B. R. C. (2000). The future of the university and the university of the future: evolution of ivory tower to entrepreneurial paradigm. *Research Policy, 29*(2), 313–330.

Grimaldi, R., & Grandi, A. (2005). Business incubators and new venture creation: an assessment of incubating models. *Technovation, 25*(2), 111–121.

Hermanto, B., & Suryanto, S. E. (2017). Entrepreneurship Ecosystem Policy in Indonesia. *Mediterranean Journal of Social Sciences, 8*(1), 110–115. https://doi.org/10.5901/mjss.2017.v8n1p110.

Iit Septyaningsih. (2020). *Kemenperin: Jumlah Wirausaha Indonesia Capai 4 Persen 2030.* REPUBLIKA.

Jansen, S., Van De Zande, T., Brinkkemper, S., Stam, E., & Varma, V. (2015). How education, stimulation, and incubation encourage student entrepreneurship: Observations from MIT, IIIT, and Utrecht University. *The International Journal of Management Education, 13*(2), 170–181.

Karatas-ozkan, M., Murphy, W. D., & Rae, D. (2005). *University incubators in the UK.* February, 41–51.

Mirzanti, I. R., Simatupang, T. M., & Larso, D. (2015). Mapping on entrepreneurship policy in Indonesia. *Procedia-Social and Behavioral Sciences,* 169, 346–353.

Permatasari, A., & Agustina, A. (2018). Entrepreneurial behaviour among undergraduate business, social and engineering students: A case study of a private Indonesian University. *Jurnal Manajemen Indonesia, 18*(2), 94–104.

Roura, J. . (2015). Business incubation: innovative services in an entrepreneurship ecosystem. *Service Industries Journal, 35*(14). 1–18.

Salem, M. I. (2014). The role of business incubators in the economic development of Saudi Arabia. *International Business & Economics Research Journal (IBER), 13*(4), 853–860.

Schmitz, A., Urbano, D., Dandolini, G. A., de Souza, J. A., & Guerrero, M. (2017). Innovation and entrepreneurship in the academic setting: a systematic literature review. *International Entrepreneurship and Management Journal, 13*(2), 369–395.

Soetanto, D., & Jack, S. (2016). The impact of university-based incubation support on the innovation strategy of academic spin-offs. *Technovation,* 50–51, 25–40. https://doi.org/10.1016/j.technovation.2015.11.001.

Wright, M., Siegel, D. S., & Mustar, P. (2017). An emerging ecosystem for student start-ups. *The Journal of Technology Transfer, 42*(4), 909–922.

Xu, L. (2009). Business incubation in China: effectiveness and perceived contributions to tenant enterprises. *Management Research Review, 33*(1), 90–99.

Yang, S., Kher, R., & Lyons, T. S. (2018). Where do accelerators fit in the venture creation pipeline? Different values brought by different types of accelerators. *Entrepreneurship Research Journal, 8*(4).