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A Study on Incubators in ASEAN Universities

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Abstract

This study delves into the operational footprint and efficacy of university-based incubators in the ASEAN region, focusing on their successes and challenges in supporting startups and entrepreneurial initiatives. By analysing 1,149 universities' websites and pertinent sources, the study paints a comprehensive picture of incubation programs within these academic environments. The analysis identified 118 universities that have established incubators, aiding ideation, acceleration, and the growth of student-founded startups, highlighting the pivotal role these entities play in fostering innovation and spurring economic growth in the region. The study shows the need for government intervention to promote the inception of more university-based incubators by aligning strategies with the unveiled benefits to fortify the entrepreneurial ecosystem. Incubators in universities play an important role in supporting the growth of student-founded startups as a key stimulator to the economic growth of a country and sustainable advancement in the ASEAN region.

Keywords: *University Incubators, Student Startups, Incubation Programmes, ASEAN Universities, Policy*

1.0 Introduction

Incubators in universities have been established since the late 1900s and have served the purpose of being a shared office, and facilitated residencies with a strategic, and value-adding intervention system (Gozali et al., 2016). University incubators have the distinguished role of supporting and establishing new businesses by providing resources and consultation to encourage entrepreneurship among students (Etzkowitz & Zhou, 2021; Jamil et al., 2015). These incubators have proven to be important for young entrepreneurs and startups as they prepare the residents for their careers in their respective fields. Students in universities are now ready for more than just education rather, they have been exploring the industrial world while studying for their degrees, because of the initiation of university incubator programmes (Hoskins & Cohen, 2015). Incubation in university also has a great advantage for the entrepreneurs, as it makes them part of a broader strategy combining academic and regional co-development which would form formal and informal university ties with industries. If the university is successful in making such ties, it could create a formal structure, that includes an incubator or liaison office (Hassan, in press; Etzkowitz & Zhou, 2021; Siemieniuk, 2016). Apart from knowledge it also attracts and retains entrepreneurial students, faculty and even researchers which reinforces the connection with the industry (Hoskins & Cohen, 2015). University incubators introduce multiple benefits to the university and the government bodies. A rapid increase in the establishment of incubators would become a massive source of revenue generation for most universities (Jamil et al., 2015). At the same time, business incubation systems are an important tool for the government to implement and facilitate technological innovation and entrepreneurship development as this would positively affect the future of the country and the economy (Mahmood et al., 2015).

University incubators are quite different from business incubators: business incubators play a crucial role in the life of an upcoming entrepreneur. Business incubators support the development of start-ups by providing advisory and administrative services, allowing the startups to grow and find their footing in the market (Stal et al., 2016). This is because new businesses require cheap places to rent and run out from, which is possible due to the business incubator (Stal et al., 2016). Business incubators also play a very important role in the economy. Small incubators are a big part of boosting economic development. The incubators nurture and help the startup grow, till it has found its place in the industry and can operate without the incubator's support, enabling them to generate employment and carry out activities in areas of technological or creative areas (Hackett & Dilts, 2004). Despite that a small business has the risk of failing within four years of its launch, the incubators should not be seen as the foundation of an economic development strategy but rather as a contribution to promoting the development of small and medium-sized enterprises (SMEs) in communities (Huda & Rejito, 2020).

University incubators have both success factors and challenges: universities move one step ahead to economic growth and to increasing entrepreneurship by structuring the mechanisms to enhance entrepreneurial culture and create new businesses (Siemieniuk, 2016). Universities are important for the economic growth of a country by actively getting involved in research and development, while innovation and incubators allow individuals with entrepreneurial mindsets to combine their theoretical knowledge with practical knowledge to become experts in their fields and acquire the ability to develop their businesses (Jamil et al., 2015; Hassan, in press). The challenges faced by the incubators have to do with the utilisation of information technology. Information Technology is still not optimised at the incubators which leads to the issue of commercialisation of the startups.

For example, only 8% of SMEs use the online platform in Indonesia to market their products, leading to the companies' struggling to reach out to all possible customers due to lack of Information Technology (Huda & Rejito, 2020). Due to poor optimisation of information technology, incubators will have trouble identifying the locations and regions they should set up in. Dahms and Kingkaew (2016) suggested that university incubators should take into consideration the institutional differences among countries, especially in upcoming and developing countries, which would help increase the acceptance of the incubator concept. The study by Li et al. (2020) also found that the location of the incubator plays a massive role in the establishment of a business. This issue was further studied by Kolympiris and Klien (2017) and they stated four rules a university incubator should follow, the second rule states "Take the region fully into account: when deciding on establishing the incubator, when selecting ventures, when providing business support to the selected ventures". It further elaborates on how the location of the incubator could determine the success of the business and how incubators in countries like Iran and Ukraine will find it harder to operate due to their respective business cultures and environments.

The main goal of the incubators is to help small, emerging start-ups cope with the barriers and to be enabled and active to compete in the marketplace, but incubators not being fully developed have also led to the failure of new ventures in the early stages. Additionally, most incubators fail to take advantage of new technologies to attract public support which gives the startups a challenge to create or access the best resources and overcome their barriers to achieve mobility and inimitability (Stal et al., 2016; Kolympiris & Klien, 2017). This study provides an analysis of the capabilities and challenges of universities with incubators within the ASEAN region: the types of programmes offered, and challenges faced by university incubators to sustain their entrepreneurial endeavours in supporting new venture creations and startups in ASEAN.

2.0 Literature Review

2.1 Global Entrepreneurship Index of Countries in ASEAN

The Global Entrepreneurship Index (GEI) provides a detailed outlook of the health of each nation's entrepreneurial ecosystem (Ácsc & Szerb, 2009). GEI links each country's entrepreneurial framework conditions with individual-level entrepreneurial attitudes, abilities, and aspirations (Ácsc & Szerb, 2009).GEI is published annually by The Global Entrepreneurship and Development Institute to show the entrepreneurship status of a country/area and is designed to help governments harness the power of entrepreneurship for sustainable economic development (Cohen, 2006). To calculate GEI, the scores of three sub-indices: entrepreneurial attitudes, entrepreneurial abilities, and entrepreneurial aspirations are averaged (Song et al., 2020).

Table 1 shows the GEI of seven countries in the ASEAN region from 2016 – 2019. By embracing technology, investing in digital infrastructure, and consolidating its agencies into just two in April 2018, Singapore achieved the highest GEI among the other seven nations. These two government organisations, International Enterprise and SPRING Singapore, serve as a single point of contact for entrepreneurs and businesses seeking financial and non-financial assistance in the form of grants, loans, tax incentives, startup hubs, networking opportunities, and business tools (Chiyachantana & Kon, 2021). However, Singapore has also faced a 20% decline from 2016 – 2019, due to lower economic activity and particularly due to a sharp decline in employment

growth, and lack of public finances due to an increase in the debt of government deficit and public debt (Auto, 2021). Meanwhile, Indonesia has the lowest GEI throughout the years but has a steady incline of 14% by the year 2019, catching up to Vietnam in the GEI rating. The implementation of the ASEAN Economic Community (MEA) in 2015, which enabled free trade among the ASEAN nations, with the combination of Indonesia's strong positive correlation between its Total Entrepreneurship Activity (TEA) and Economic Growth (GDP) of 0.853, made it possible for Indonesia to benefit from the four pillars of ASEAN economic integration: a single market and production base, a competitive economic area, equitable economic development, and integration into the global economy (Elistia et al., 2020).

University incubators play a vital role in supporting the growth of a nation's GEI through various methods. These institutions foster innovation by providing a conducive environment to convert ideas into practical businesses (Marcon & Ribeiro, 2021). As the key contributors to student-founded startups, they offer necessary resources such as mentoring, funding, workspaces and curating special programmes and ensuring the student-founded startups have a chance to survive in the presence of the giants of the industry (Pauwels et al., 2016; Phan & Siegel, 2006). However, national policies play an important role in supporting the growth of incubators in universities and startups, including student-founded startups.

Table 1: Global Entrepreneurship Index of Countries in ASEAN (GEDI, 2023)

	Year				Index difference per year		
Countries	**2016**	**2017**	**2018**	**2019**	**2016-2017**	**2017-2018**	**2018-2019**
Singapore	66	52.2	52.7	52.4	-13.8	0.5	-0.3
Malaysia	37	33.4	32.7	40.1	-3.6	-0.7	7.4
Brunei Darussalam	37.3	33.9	34.3	36.5	-3.4	0.4	2.2
Thailand	33.4	27.1	27.4	33.5	-6.3	0.3	6.1
Indonesia	22.8	21.2	20.7	26	-1.6	-0.5	5.3
Vietnam	28.2	22	23.2	26	-6.2	1.2	2.8
Philippines	27	24.1	24.1	23	-2.9	0	-1.1

2.2 National Policies Supporting Startups

Countries in the ASEAN region have each implemented various policies to support startups and the entrepreneurship ecosystem within the country. One of the policies is regarding tax reduction for venture capitals, new businesses, and startups (Bhide, 1992). The Ministry of Finance Indonesia provides corporate income tax (CIT) reductions for investment plans with a capital of more than IDR 500 billion to 1,000 billion for periods ranging from 5 to 15 years (Lian, 2022; Thanh et al., 2020). Once the capital reaches over 1,000 billion, the CIT reduction can be extended over periods of 10 to 25 years (Lian, 2022; Thanh et al., 2020). However, Vietnam and Malaysia have adopted a maximum reduction of 50%, with the most beneficial CIT rates fixed at 10% to 12.5%, respectively, whereas Laos, Singapore, and the Philippines have maximum CIT reductions ranging from 70–83% (Thanh et al., 2020).

Tax holiday is another form of tax incentive, which exempts investors from paying taxes for a fixed number of years. However, tax holidays are known to be a risk for having high redundancy rates (Stausholm, 2017). Countries such as Indonesia, which has produced four startups achieving a valuation of more than one million US dollars and one startup valued over ten million US dollars, better known as decacorn, offer up to 20 years of tax holiday from the initial stage of the business. Once the 20 years are over, the companies also receive 50% tax reductions for the next two years (Adawiyah, 2021; Thanh et al., 2020). Similarly, Brunei also offers startup tax holidays which extend up to 20 years, while Laos, Singapore and Thailand offer only a maximum of 15 years of tax holidays to startups (Thanh et al., 2020; Kohpaiboon, 2020). However, Cambodia and Vietnam offer 5 – 10 years of tax holidays, despite this, both Cambodia and Vietnam have agencies such as FasterCapital which help startups raise capital, find technical teams, and develop minimum viable products (MVP). The agencies also help ensure growth (Iradian, 2007; Aprian & Irawan, 2019; Thanh et al., 2020). Apart from providing tax incentives to startups and businesses, all the ASEAN countries provide tax incentives to investors as well, which make it challenging to place legal systems in charge of tax incentives across ASEAN countries have their own unique system, culture, and style(Abidin et al., 2020).

ASEAN countries implement their mechanism of institutions and processes in support of profit-based tax incentives (Van, 2019). Malaysia considers companies in the manufacturing, agricultural, hotel and tourism sectors to be eligible for pioneer status (PS) and investment tax allowance (ITA) (Abdurofi et al., 2021). With the eligibility of PS status, companies are exempted 70% from CIT on the statutory income for five years and the remaining 30% is taxed at the prevailing rate of CIT. Apart from CIT, ITA is granted 60% qualifying capital expenditure sustained for a period of five years (Thanh et al., 2020). However, Singapore provides a partial tax exemption scheme available to all companies, with exemption thresholds designed to benefit SMEs in Singapore, e.g., manufacturing approved products with high technological content or providing qualifying services are eligible to apply for tax exemptions for 5 – 15 years (Perdana et al., 2022). Companies in Brunei with gross sales/turnover of BND one million (equivalent to approximately USD 718,000) or less are exempted from CIT, otherwise, they are charged at a zero rate (Thanh et al., 2020).

Additionally, tax incentives are granted in Vietnam based on regulated encouraged sectors, locations, project sizes, and certain agricultural incomes, such as in the areas of education, health care, sports and culture, high technology, environmental protection, scientific research and technological development, processing of agricultural and aquatic products, software, and renewable energy (Van Tan & Quoc Trung, 2020). Vietnam released tax updates called Decision 29/2021, which took effect on 6 October 2021, providing guidance to qualified R&D and large investment projects for investment incentives (Shira, 2021). The companies in Vietnam can make use of a favourable package comprising a preferential tax rate of 5% for a period of 37 years, six years of tax exemption, additionally, a 50% CIT reduction for a subsequent 13 years, while certain socialised sectors like education and health enjoy the 10% rate for the entire life of the approved project (Thanh et al., 2020; Shira, 2021)

Cambodia has a unique policy for providing tax exemptions, as Cambodia still relies heavily on agriculture. It offers tax exemptions on profits from the sale of agricultural products produced by any individual who is not considered to be a taxpayer (Mah, 2022; Thanh et al., 2020). Cambodia has also placed a council in charge of the Development of Cambodia (CDC), to serve as a one-stop service for companies to register their projects and obtain approval for a Qualified Investment

Project (QIP) status (Savuth & Sothea, 2023; Therith, 2022). Once the company has achieved the QIP status, it is eligible for the Certificate of Compliance (CoC) issued by the CDC, ensuring that the goods or services supplied meet the standards, to guarantee investment incentives to the project (Thanh et al., 2020; Medina, 2023).

The Ministry of Finance (MoF) in Indonesia provides up to 100% tax holiday for the CIT which is eligible for 5 – 20 years from the start of commercial production (Seno & Chalid, 2022). The tax holiday depends on the investment amount. However, this policy was discontinued in 2017 with only five taxpayers who were part of the scheme with an investment plan value of IDR 38.7 trillion, located over four provinces (Seno & Chalid, 2022). Nevertheless, Indonesia is making efforts to move towards promoting businesses and startups which promote renewable energy, making these companies eligible for Tax Allowance which includes CIT reduction, and suspension or elimination of VAT depending on the renewable energy project (Hendriwardani et al., 2022).

The Thai cabinet has approved income tax exemptions for investments in Thai startups, regardless of whether the investment is direct or indirect, or through individuals, companies or Corporate Venture Capitals (CVC) (Medina, 2022). This policy is only applicable to 12 government-promoted industries; aviation and logistics, biofuels and biochemicals, robotics, digital economy, medical hub, smart electronic, medical and wellness tourism, affluent tourism, agriculture and biotechnology, food for the future, defence and education, and human resource development. If the companies do not receive any tax holiday, they are still eligible for a 50% reduction in the CIT rate (Thanh et al., 2020).

Lastly, the Philippines has four major sectors which contribute to its economy, Agritech, Edtech, Healthtech and Greentech, which are constantly promoted by the government (Teves et al., 2023). The Philippine Innovation Act (PIA) released polices for innovation funds allowing enterprises to receive grants if their projects are innovative solutions in the priority sectors. Not only is the Philippines releasing grants, but the Innovative Startup Act (ISA) creates programmes and incentives which support and develop startups through the help of startup venture funds, managed by the Department of Trade and Industry (Teves et al., 2023). Apart from startup venture funds the Department of Science and Technology (DOST) and the Department of Information and Communications Technology have also begun startup programmes with the national startup portal and private incubators and accelerators to provide grants and funds for the startups (Teves et al., 2023). The government is also making active efforts to transition to digitalisation allowing startups to access government services for support in obtaining permits or access any sort of support more quickly and efficiently (Teves et al., 2023; Treceñe, 2021). The review of the various national policies supporting startups in the ASEAN countries indicates the importance of encouraging startups within a nation, especially for student-founded incubators within universities.

3.0 Research Methodology

This section describes the methodology employed to gather comprehensive data to derive insightful findings related to identifying university incubators and policies supporting startups within the ASEAN region.

3.1 Data Collection

The secondary data for this study was sourced from educational websites, namely www.easyuni.mu and www.studyabroad.shiksha.com. These platforms were selected for their widespread databases containing information on universities across the ASEAN countries. The primary objective was to identify the total number of universities within each ASEAN nation. Subsequently, each identified university's official website was visited and thoroughly reviewed to check for the presence of an incubator and to identify the specification of the incubator whether it is an in-house incubator, online, or a third-party incubator. The university websites were also used to identify the programmes offered by these incubators to support the student-founded startups. The universities were further divided into public and private institutions, to facilitate the understanding of the incubator landscape across different university types.

3.2 Policy Analysis

The study also required an intensive exploration of past studies related to startup-supportive policies within the ASEAN region. This phase consisted of performing an in-depth literature review to understand prior research into policies fostering support and growth of startups. Beyond the body of academic research, several policies were reviewed from www.aseanbriefing.com. This platform was chosen for its ability to offer insights into up-to-date contemporary policies and initiatives undertaken by each ASEAN country in the context of tax incentives, startups, and entrepreneurship.

3.3 Data Synthesis

The gathered data from both university incubators and startup-supportive policies were carefully synthesised to extract meaningful and supportive insights. The information collected on university incubators was organised to show the presence or absence of incubators, the grouping of universities as public or private and, the types of programmes offered through the incubators. The programmes were then classified into three categories: ideation, growth, and acceleration. This categorisation facilitated a comprehensive analysis of the ecosystem consisting of incubators in the ASEAN region. Furthermore, the data concerning the startup-supporting policies were thoroughly compared. This process helped in identifying trends, commonalities, and disparities in policy initiatives across ASEAN. The synthesis of both incubator and policy data aimed to provide a complete view of the entrepreneurial ecosystem among the ASEAN nations.

3.4 Universities with Incubators in ASEAN

The data shown in Table 2 reveals that the ASEAN region, excluding Myanmar, has a cumulative total of 1,149 universities. Among them, 794 universities are private institutions, while 448 are public institutions. Strikingly, as of the year 2022, the ASEAN region exhibited a notable scarcity in the number of university incubators, with only 118 university incubators in the entire ASEAN region. An intriguing observation is that 64% of the incubators are housed within esteemed public universities. This shows the pivotal role these institutions play in fostering entrepreneurial endeavours and in encouraging innovative initiatives. The synergy between public universities and the incubation ecosystem shows the commitment the universities exhibit in nurturing startups and guiding them to success with the help of government agencies and benefiting policies.

Table 2: Number of Incubators in Universities in the ASEAN Countries

Country	Private Universities		Public Universities		Incubators in the universities		Total number of universities
	Number of Incubators	Number of Universities	Number of Incubator	Number of Universities	Total number of incubators	Percentage of total incubators (%)	
Brunei			2	7	2	1.7	7
Cambodia	7	33	5	22	12	10.2	55
Indonesia	2	486	12	80	14	11.9	566
Laos			1	3	1	0.9	3
Malaysia	12	91	8	20	20	17	111
The Philippines	2	90	5	64	7	5.9	154
Singapore	9	20	11	16	20	17	36
Thailand	8	42	21	77	29	24.6	119
Vietnam	2	31	11	67	13	11	98
Total	42		76		118		1,149

Note: The data was collected from January 2022 to April 2022

Indonesia, which has 49% of the total number of universities, only has a total of 11.9% or 14 incubators out of the total number of incubators. A study undertaken by Famiola and Hartati (2018), provides a comprehensive examination of the determinants contributing to the scarcity of incubators in the Indonesian context. Despite Indonesia's gradual elevation on the GEI, the notable scarcity of incubators shows the necessity for proactive governmental engagement. To boost the capacity and awareness of incubation endeavours, it is of utmost importance that the governmental entities take on an active role in promoting and advancing the incubation programmes while also promoting entrepreneurship through different mediums. The efficacy of university incubators relies heavily on the involvement of seasoned experts and accomplished entrepreneurs who can contribute greatly to the incubation process (Famiola & Hartati, 2018). Unfortunately, the incubation landscape in Indonesia is currently facing a lack of mentors, advisors, and critical figures which are indispensable for providing guidance to upcoming entrepreneurial ventures (Famiola & Hartati, 2018).

In contrast, Singapore is home to a total of 36 universities, 55.5% of which have incorporated incubators into their operations. The number of these incubation entities is championed by public universities which can be seen in Table 3, showing that the majority of physical incubators are in public universities. The undeniable endorsement of entrepreneurship, a defining facet of Singapore's socioeconomic fabric, shows prominently through their GEI rating. The Singapore government stands as a proactive agent, orchestrating complex interventions in various aspects of society (Wang, 2018). This approach of the government yields clear outcomes, as evidenced by the accelerated evolution of university infrastructural capacities (Wang, 2018). This phenomenon serves as a baseline for the establishment of university incubators, expedited in no small measure by the diverse range of schemes offered by the Research, Innovation and Enterprise Council (RIEC) (Cheah et al., 2016). In tandem with this, Singapore has cultivated an ecosystem that

embraces and promotes calculated risk-taking by visionaries and entrepreneurs (Cheah et al., 2016). Singapore has also established venture-friendly legislation which allows entrepreneurs to make more prominent decisions. Furthermore, the country has also demonstrated commitment to refining its incentive framework, wherein tax benefits and exemptions are interconnected to invigorate the startup landscape (Abdurofi et al., 2021; Cheah et al., 2016).

Table 3: Existence of University Incubators in Physical and/or Virtual Spaces in ASEAN

Countries	Incubators in:		Total number of Incubators
	Private Universities	Public Universities	
Brunei			**2**
Physical space		2	
Cambodia			**12**
Physical space	6	5	
Indonesia			**14**
Physical space	1	7	
Virtual Space	1	1	
Laos			**1**
Physical space		1	
Malaysia			**20**
Physical space	7	7	
Virtual Space	2	1	
The Philippines			**7**
Physical space	2	4	
Virtual Space		1	
Singapore			**20**
Physical space	3	8	
Hybrid		1	
Thailand			**29**
Physical space		5	
Vietnam			**13**
Physical space		1	
Grand Total	**22**	**44**	**118**

Table 3 provides an overview of the presence and characteristics of university incubators, both in the physical and virtual domains. The data shown in the table consists of data available from individual university websites. A scrutiny of the data reveals insightful patterns across ASEAN countries. In Brunei, both existing public incubators are established as physical entities. In Cambodia, the private universities exhibit a notable dominance of physical incubators, numbering seven in total. Furthermore, the public universities contribute to this landscape with four physical incubators and one additional virtual incubation facility. Indonesia's incubation landscape consists mainly of physical incubators within public universities, with 11 out of 12 such initiatives being physical, and the remaining one adopting a virtual framework. In contrast, private universities house only a single virtual incubator. Laos, with its modest incubator presence, has one of its three universities offering a physical incubation environment. Malaysia, on the other hand, has a diverse group. Among private universities om Malaysia, nine out of 12 incubators are physical, while the

remaining three are virtual setups. Notably, public universities in Malaysia have eight physical incubators. Within the Philippines, only two out of 90 private universities have physical incubators, while the public universities present a more balanced distribution with four physical and one virtual incubator. Singapore, renowned for its entrepreneurial advocacy, has eight physical incubators and a unique hybrid incubator, signifying the fusion of physical and virtual elements. The public universities in Singapore have 11 physical incubation spaces. Thailand has eight private university incubators, all being physical setups. In addition, the country's public universities showcase 20 physical and one virtual incubator. Vietnam, in its dynamic incubator ecosystem, houses two physical incubators within private universities. Among public universities, 10 incubators are physical, with one adopting a virtual framework. In short, the presence of university incubators across ASEAN countries underscores their pivotal role in cultivating and empowering student-founded startups to the best of their abilities and infrastructure. The expanding landscape signifies the vital role of incubators as catalysts for innovation, supported by diverse programmes and resources.

3.5 Managing a Successful University Incubator

The manner in which an incubator is managed influences the success of both incubator and the residents of the incubator. The management of an incubator includes providing different types of services, for instance, tangible services, infrastructure, subsidised office space, and managing other tangible resources such as receptionist services, meeting rooms, or free incubator tenants(Hassan, in press; Dahms & Kingkaew, 2016). However, the management is much more than just about infrastructure or services, it is also about using different types of management methods, such as Macro Management (Tang et al., 2014). Macro management is a value adding process of monitoring and assisting in resource infusion by also combining technology and business development to allow strategic planning for a successful business (Stal et al., 2016; Hackett & Dilts, 2004; Adham, 2008). University Incubators in Ukraine and in the USA provide technical and business management for startups, to ensure the student-founded startup stays ahead of the other incubators, thus increasing its chance to succeed (Mian, 1996; Li et al., 2020). Major differences exist between public and private university incubators: the private incubators concentrate in selected fields while public incubators are known to sponsor a large variety of areas (Frenkel et al., 2008). Various programmes are offered by university incubators which can be classified into three different types: ideation, acceleration, and growth. To identify these programmes in ASEAN university incubators, each incubator website was visited to gain insights into how many incubators offered which sorts of programmes.

In Table 4, it is evident that among the 118 university incubators in the ASEAN region, 50 of them published insights into how they approach the ideation stage. Notably, the focus shifted for 94 incubators, which primarily concentrated on facilitating the acceleration stage. Lastly a total of 37 incubators point out how they sustain their involvement during the growth stage. Ideation or Entrepreneurial Ideation is promoted through the learning and teaching process of entrepreneurship in universities (Wardoyo et al., 2023). During the ideation stage, incubators host workshops or events to help individuals generate ideas and solutions, by different methods such as sketching, or creation of an MVP, group brainstorming sessions and even writing down any idea they have, also known as design thinking (Dam & Siang, 2020). Acceleration, alternatively known as Seeding, is a practice embraced by almost all university incubators throughout the ASEAN region. Incubators play a crucial role in assisting early-stage startups through diverse means, including mentorship, access to educational resources, legal guidance, and financial

backing (Aernoudt, 2004). As startups progress into the acceleration phase, their focus shifts towards securing seed funding, which can be sourced from venture capitalists or business angels, serving a major role in their development journey and facilitating their successful market entry (Aernoudt, 2004). The final stage is growth, marked by startups solidifying their presence and achieving a clear position in the industry. Typically, during this phase, startups transition from the incubators, embarking on an independent journey (Yusubova et al., 2019). Drawing upon the knowledge, skills and industry connections made during their incubation journey, they continue to evolve and refine their enterprises (Yusubova et al., 2019).

Table 4: Types of Programmes Organised by University Incubators in ASEAN

	Ideation	Acceleration	Growth
Brunei			
Public Universities	1	2	1
Cambodia			
Private Universities	3	6	4
Public Universities	4	5	1
Indonesia			
Private Universities	1	1	
Public Universities	3	7	2
Laos			
Public Universities	1	1	
Malaysia			
Private Universities	8	11	4
Public Universities	3	7	3
Philippines			
Private Universities	1	2	2
Public Universities		4	
Singapore			
Private Universities	5	9	4
Public Universities	8	11	4
Thailand			
Private Universities	2	6	3
Public Universities	5	14	7
Vietnam			
Private Universities	2	2	
Public Universities	3	6	2
Grand Total	50	94	37

**The table only displays information available on the university websites*

4.0 Discussion and Recommendations

The study on incubators in the ASEAN universities reveals the scarcity of institutions which have established in-house incubators. This observation is made during the emergence of policies and incentives aimed at funding and financing the student-founded startups in university incubators. This offers a distinctive and compelling backdrop for studies on startups and their valuation within

university incubators, which offers valuable insights for future research and practical suggestions for stakeholders. The lack of established university incubators can be attributed to several factors. The novelty of policies and incentives shows that the ecosystem is still evolving, and the full impact of these initiatives might need more time to materialise. Additionally, cultural, institutional, and resource-related barriers also play pivotal roles in shaping the increase of university incubators. Cultural norms and historical practices may influence the increase of entrepreneurship and innovation within academic institutions. Institutional frameworks such as curriculum design and research priorities might need to be updated to be adapted and be seamlessly integrated with incubation initiatives. Resource limitations could also hinder the creation and sustenance of incubators. Future research could delve into the complexities of startup valuation within the unique incubator context. Analysing the valuation methodologies, models, and factors that are significant can shed light on the issues faced by startups emerging from university incubators. Additionally, investigation on how valuation of startups may impact investment attraction, growth trajectories, and exit strategies could uncover the practical implications of valuing a startup.

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