



ASEAN GUIDELINES ON FOSTERING A VIBRANT ECOSYSTEM FOR STARTUPS ACROSS SOUTHEAST ASIA



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one identity
one community



ASEAN GUIDELINES ON FOSTERING A VIBRANT ECOSYSTEM FOR STARTUPS ACROSS SOUTHEAST ASIA

The ASEAN Secretariat
Jakarta

The Association of Southeast Asian Nations (ASEAN) was established on 8 August 1967. The Member States are Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand and Viet Nam.
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Foreword

We are living in a world where innovation and technology are paramount to growth strategy and give competitive advantages to businesses. Digital technology, medical advancement, distinct experience and new financial solutions, among others, have become much more prevalent in the last decade and even more now as we face a global health and economic crisis. Startups, for the most parts, have always been seen as the driver of innovation. They play a critical role these days – we see more instances of startups innovating and developing rapid solutions and helping many countries shift towards fully digital work, education and health services.

Micro, small and medium enterprises (MSMEs) are the backbone of ASEAN economies, accounting for more than 96% of total establishment and contribute to between 51.7% and 97.2% of total employment in each ASEAN Members States (AMS). The ASEAN Coordinating Committee on Micro, Small and Medium Enterprises (ACCMSME) is committed to creating globally competitive, resilient and innovative MSMEs that are seamlessly integrated to the ASEAN Community while at the same time promoting inclusive development in the region. Under the ASEAN Strategic Action Plan for SME Development 2016-2025, we endeavour to promote innovation and technology as key competitive advantages for MSMEs, and thus, recognising startups as the driver of innovation, aligned with the “Strategic Goal A: Promote Productivity, Technology and Innovation” of the Action Plan, it is natural that ACCMSME’s undertaking extends to startups, in addition to enterprises that fall within the class sizes of MSMEs as defined by AMS.

The ASEAN Guidelines on Fostering a Vibrant Ecosystem for Startups across Southeast Asia seek to provide insights on the unique characteristics of startups that demand different approaches from the traditional MSMEs. It identifies the key factors and actors in a startup ecosystem, elaborates the roles of the ecosystem actors and highlights priority intervention areas for AMS either at the regional, national or local level through concrete initiatives. It also advocates for the continuation of support for entrepreneurship and startups in order to manage the fallout from COVID-19, with focus on growth- and innovation-oriented new ventures.

A key message that we hope to deliver from this Guidelines is that the work to build a vibrant ecosystem conducive for startups to thrive in requires strategic synergy among the key actors—governed by and under the purview of various line ministries in ASEAN. Thus, we hope this document would serve as a common reference point for ASEAN policymakers in building and sustaining a vibrant ecosystem for scalable startups at national and ASEAN levels, and conclude some common principles amongst AMS.

The Guidelines were made possible with support from the Government of Canada and technical assistance from the Organisation for Economic Cooperation and Development (OECD) through the Canada-OECD Project for ASEAN SMEs. We look forward to strengthening ACCMSME’s partnership with relevant stakeholders and collaborative efforts in realising the goal of a vibrant ecosystem.

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ASEAN Guidelines on Fostering a Vibrant Ecosystem for Startups across Southeast Asia

1. Introduction

Startup firms – in the sense of growth and innovation-oriented new firms – are a key driver of innovation, job creation and economic growth. Many will scale into large companies in their own right or provide fodder for innovation in larger companies.¹ The global startup economy continues to grow, creating an estimated USD 2.8 trillion in value between 2016 and 2018.² This amounts to a 20.6% increase over the previous period and is more than double what it was five years previously (GSER, 2019).

In 2018, it was reported that at least 5 800 active startups were operating across all major verticals in the ASEAN region including e-commerce, fintech, enterprise solution, big data and consumer goods and services (e27, 2018). Startups providing new products and services are growing from strength to strength across the region. Since 2012, Southeast Asia has given rise to more than ten unicorns, with a combined market value of over USD 34 billion.

During its 8th meeting in November 2019, the ASEAN Coordinating Committee on Micro, Small and Medium Enterprises (ACCMSME) took note that definitions of and policy support for startups across ASEAN Member States (AMS) varied widely. Some AMS focus on technology-based startups in their development programmes, for instance, whilst other AMS address both technology and non-technology startups.

The decision to develop these guidelines recognises the opportunities and benefits of regional collaboration to develop entrepreneurship and the startup ecosystem across ASEAN countries. Through the Guidelines, the ACCMSME hopes to create a more conducive environment for scalable startup creation and growth, facilitate expansion across borders, and realise synergies amongst respective local and national ecosystems, moving towards greater regional integration. Regional projects in the area of startup development undertaken by ACCMSME in 2020 include the ASEAN-Republic of Korea (ROK) Startup Ecosystem Study and the ASEAN-ROK Startup Policy Roadmap.

2. Objectives and orientation

These Guidelines are intended to serve as a common reference point for ACCMSME and AMS in thinking about startups and startup policy. They aim to elaborate how policymakers can build and sustain a vibrant ecosystem for scalable startups at subnational, national and ASEAN-region levels, and conclude some common principles amongst AMS. They also intend to highlight some priority intervention areas for AMS, and to spell out some ways in which AMS could collaborate at community level through concrete initiatives. Finally, they advocate for the continuation of policy support for

¹ IBM, HP, Microsoft, Oracle and Cisco all constantly acquire startups and take advantage of their own size and distribution channels to scale up the innovations they have purchased.

² This figure refers to startup valuations and exit values.

entrepreneurship and startups, even as policymakers direct heightened support towards more traditional enterprises, in order to manage the fallout from COVID-19. This final objective ties to a broader point. Whilst the Guidelines focus predominantly on growth- and innovation-oriented new ventures, they also recognise the need to improve the enabling environment for more traditional new businesses (i.e. those deploying tried- and-tested business models and holding more limited growth aspirations). However, these firms will not be the focus of the Guidelines, which aim to strengthen the ecosystem for a higher risk and higher reward class of enterprises.

3. Overview of the existing startup scene in ASEAN

In order to explore the current state of startups across ASEAN, it is important to first define the term. Whilst precise definitions vary, it is commonly understood to be a new venture, initiated to identify, effectively develop, and validate a scalable business model. It is a growth-focused and usually high-risk endeavour. It is also young – typically not more than three to five years old, dependent on sector, and often technology- or innovation-enabled.

According to data collected through the complementary ASEAN-ROK Startup Ecosystem Study, definitions vary widely across ASEAN. Most countries have not yet established a clear official definition – a few exceptions being Malaysia, the Philippines and Singapore. These definitions typically combine the need for a startup to be a new firm with a need for it to be innovation- and/or technology-intensive. In some cases the definition is very broad – the Philippines, for instance, defines a startup as “any person or registered entity in the Philippines which aims to develop an innovative product, process or business model” (Innovative Startup Act, RA 11337/2018). Malaysia has introduced considerations of venture age and quality into its definition, namely “a technology- or innovation-enabled business at early stage with a scalable business model and a high-growth strategy.” Singapore understands a startup as one that has innovative product or business model or with the potential to be disruptor, less than 5 years of age and employs at least 1 person. Many AMS have only recently begun to consider startup policies, and few have adopted an ecosystem approach. In most member states, startup supports are concentrated overwhelmingly in a handful of urban areas, as are startups and the markets they target – and there are thus limited opportunities for rural communities.

During the data collection exercise, ACCMSME members most commonly cited the following constraints to startup development: *i)* access to capital; *ii)* access to talent; *iii)* burdensome regulations, including overlapping regulations across sectors, and;³ *iv)* access to mentoring, networks and advisory services. Whilst many startups in ASEAN are digitally-enabled, some AMS, particularly Cambodia, Lao PDR and Myanmar, also cite challenges related to broadband access, cost and quality.

³ A factor that also echoes a lack of policy clarity, with a number of countries mentioning that different agencies often hold overlapping responsibilities in the delivery of policies affecting the startup ecosystem.

4. Factors and actors in a startup ecosystem: A framework for policy support

Policymakers are increasingly taking an ecosystem approach to strengthen startup activity. This approach aims to take a more strategic, longer-term and holistic view, looking at enhancing the conditions for entrepreneurship and building up ecosystems.⁴ The rationale for this is that businesses do not evolve in a ‘vacuum’ (Moore, 1993), that innovative activities are highly porous (OECD, 2014; Haskel and Westlake, 2017) and that the barriers to entrepreneurship are multi-faceted and require comprehensive packages.

Broadly, the “startup ecosystem” refers to the institutions and resources that influence entrepreneurial drive and performance. The OECD Entrepreneurship Indicators Programme highlights and recognises seven main factors, namely: *i*) the regulatory framework; *ii*) infrastructure; *iii*) market conditions; *iv*) access to finance; *v*) knowledge creation and diffusion; *vi*) capabilities, and; *vii*) culture. In these areas, one may observe important institutional or market failures that public policy could help to address (Table 1). The extent to which these factors influence a venture’s performance may vary according to its characteristics – not least, the sector in which it operates.

Table 1. Seven factors of a startup ecosystem, potential gaps and policy responses

Ecosystem factor	Illustrative gaps	Illustrative policy role	Illustrative policy actions
Regulatory framework	Legal and administrative barriers	Reforming legal and regulatory frameworks	Equal tax treatment for startups, updating licensing requirements, reducing compliance costs
Infrastructure	Missing or poorly accessible infrastructure	De-risking investment, ensuring competition, helping to identify social priorities	Public-private partnership schemes, risk mitigation instruments, sector liberalisation reforms, identification of priorities
Market conditions	Absence of demand	Enhancing market access and creating new markets	Boosting access to public procurement and international markets through information, logistical support and export finance
Access to finance	Funding gaps	Closing funding gaps; de-risking the market for private players	Loans, guarantees, co-investment funds, support for fintech sector
Knowledge creation and diffusion	Limited science-industry interaction; legal barriers	Assessing IP frameworks, incentivising and facilitating science-industry collaboration	Proof of concept, innovation vouchers, support for university spin-offs, business incubators
Capabilities	Information asymmetry	Facilitating linkages, providing services and teaching entrepreneurial competencies in compulsory education	Promote networking amongst different ecosystem actors through joint events, initiatives and strategy setting; business development and advisory services
Culture	Little tradition for business and innovation	Transforming mindsets	Entrepreneurial education, events, awareness campaigns, prizes

4.1 Factors to consider in building up a vibrant startup ecosystem

Factor 1. Regulatory framework

Regulatory burdens, distortions and administrative barriers can place disproportionate costs on startups relative to large and incumbent firms. Specific issues could include: *i*) substantial, unclear and unevenly-enforced licensing and permitting requirements; *ii*) prohibitive business registration and taxation rules, and; *iii*) antitrust exemptions that may restrict competition.

⁴ As opposed to limiting support to a grant or training programme for a small selection of startups.

To address these barriers, ASEAN member states should consider introducing a package of measures to improve regulations. These measures would typically include: *i*) using stakeholder consultation and an SME Test (with a specific consideration of startup impact) in regulatory review, reform and development processes; *ii*) developing a straightforward, up-to-date and easily accessible tool (e.g. a website) that informs startups of their obligations and policy supports, as well as how to comply or benefit; *iii*) piloting a rating and review platform for government services; *iv*) developing a “doing business” index for startups that looks at the regulatory environment across different subnational regions.

Factor 2. Infrastructure

Infrastructure gaps – such as those in telecommunications architecture, as well as transportation and logistical infrastructure – may impinge scale up, particularly for startups that aim to operate internationally.

Policymakers should help to lower the cost, increase the speed, and broaden the coverage of broadband services. This could include efforts to boost competition in the telecommunications sector – for instance by lowering barriers to foreign investment – and continued efforts to increase investment in infrastructure, for instance through blended finance and other forms of public-private partnership. A prioritisation exercise could be considered, inputting bottlenecks identified during SME and startup strategy setting into broader infrastructure development strategies (including, for instance, the ASEAN Master Plan on Connectivity 2025).

Factor 3. Market conditions

Startups may find it more difficult to access markets than established firms. This is due to the fact that they often lack contacts and networks, and their “newness” can invite more caution from potential buyers, investors and suppliers. In some countries, this disparity is further compounded by policy rules – for instance, public procurement rules, whereby firms must have been operating for a certain number of years and have a certain minimum turnover in order to apply for a contract. In some cases, the value of public procurement lots may also be too high for a startup to handle. Costly and opaque cross-border trading procedures may disproportionately affect startups, which typically have fewer financial resources and more limited experience through which to navigate them. Regulatory differences between countries may also limit a young firm’s ability to scale across borders.

Policymakers should consider a range of measures to address these gaps, such as reviewing and reforming public procurement rules, providing more freely-accessible and accurate information on the requirements for entering foreign markets as well as available policy supports, helping to network different players, and trade facilitation reforms that could reduce unnecessary costs at and behind the border.⁵ By engaging in dialogue and cooperation with natural markets for one’s indigenous startups and scaleups, policymakers could also help to iron out some of the regulatory barriers to

⁵ A measure that will be very important for startups to grasp the sizeable e-commerce opportunities across the region.

cross-border expansion – for instance complex visa and subsidiary registration requirements, high taxation costs, and/or prohibitive bankruptcy rules.

Factor 4. Access to finance

In many markets, startups face extremely limited access to finance, both in terms of aggregate volume as well as instrument range. Risk capital – which can help innovative startups to pass the “valley of death” period (before revenues come in and a business model is proven) – is particularly scarce. This is even more the case in emerging markets, where investors may be discouraged by a higher cost of doing business as well as concerns over risk and a lack of deal flow.

Environments with a diversified range of instruments can enable startups to find the funding that is best suited to their needs and provide more exit opportunities for investors, thus increasing the attractiveness of the market overall. The market can also be made more attractive to investors by increasing institutional transparency, as well as regulatory and legal clarity, and by building more robust investor protection and corporate governance regimes. In some cases, however, policymakers may wish to intervene more directly to catalyse the market. A few examples of policy measures include tax incentives for investors in startups, public-private co-investment schemes, and financial education programmes. In some countries, such as Israel, policymakers have taken a more systematic and intensive approach, building a venture capital market almost from scratch, using endogenous resources such as the country’s diaspora.

Factor 5. Knowledge creation and diffusion

Knowledge creation and diffusion can be hindered by the fact that innovation tends to produce strong positive externalities. Whilst it is typically costly to devise, test and commercialise a new business model or technology, these can often be used or replicated relatively easily by other firms once proven – particularly in the digital age. This may discourage would-be innovators, and issues around intellectual property regimes – which are often poorly-designed, arbitrarily enforced and economically costly – may do little to address their concerns. There may also be synergies that have not materialised organically – for instance between research facilities and entrepreneurs, whereby the latter can help to commercialise innovations discovered by the former.

Policymakers should help to address these barriers by helping to connect researchers and entrepreneurs, and by lowering the cost and risk of investment in innovation. This could be done through interventions such as innovation vouchers, support with proof of concept, support for university spin-offs, the creation or co-creation of business incubators, and/or by assessing and potentially adapting IP frameworks.

Factor 6. Capabilities

Market and institutional failures may produce a shortage of entrepreneurial capabilities. In many countries, few individuals possess the skills required to launch and operate a scalable business (for instance pitching, marketing and financial accounting skills), and there are few opportunities or incentives to learn. This is compounded by limited access to networks that could help founders to find partners for peer learning, investment, development advice and market intelligence.

Founders may also find it difficult to secure the talent required to scale, on account of market and institutional gaps. Managerial and technical skills seem to be in particularly short supply across most ecosystems. In many countries, the private market for business advice functions poorly, meaning that this cannot serve effectively in mitigating managerial skills gaps.

To address these barriers, policymakers could step up efforts to boost education and skills in the general population, particularly in the area of ICT and basic competencies. They could support mentoring schemes and workshops for ambitious and capable entrepreneurs selected through a competitive process. They could also help to catalyse a private market for business advisory services through, for instance, a voucher scheme to strengthen local demand. Finally, they could introduce entrepreneurial education in primary, secondary and tertiary education, in order to diffuse these competencies more broadly. These initiatives can be developed in partnership with the private sector. For instance, in Ireland, a business consortium and the country's startup agency (StartupIreland) have developed a database of experienced Irish entrepreneurs who have volunteered their time to advise startups (OfficeHours.ie).

Factor 7. Culture

Entrepreneurship is not always seen as an attractive career option, limiting the potential pipeline of startup entrepreneurs. In many countries, regions and population segments, actions are needed to foster a culture where successful entrepreneurs are celebrated, recognised and rewarded. Other actions may also be required to foster an entrepreneurial disposition amongst certain sections of the population – to equip them with the skills to recognise opportunity and effectively assess risk.

To address these barriers, policymakers should consider introducing entrepreneurial education modules in primary and secondary school curricula to inform about the benefits and feasibility of entrepreneurship; as well as entrepreneurship awareness-raising campaigns and recognition events and prizes.

4.2 Actors present in a vibrant startup ecosystem

Policy needs to strengthen the above factors of a startup ecosystem in partnership with networks of actors that are part of the startup ecosystem and make important contributions to it. These actors include: *i*) established entrepreneurial actors, which provide incubation, acceleration, coaching and mentoring services; *ii*) entrepreneurial resource providers, which support entrepreneurs with financial resources and facilities, as well as knowledge and opportunities for collaboration (e.g. banks, large firms and research institutions); *iii*) entrepreneurial connectors, who foster linkages in the ecosystem (e.g. professional associations), and; *iv*) entrepreneurial nurturers, who help to foster an entrepreneurial orientation, basic skills, and public recognition of entrepreneurship as an attractive career path (e.g. educational institutions and media providers).

Table 2. Types of actor in the startup ecosystem and their roles

Ecosystem role	Actor	Ecosystem factor	Illustrative collaboration areas
Established entrepreneurial actors	Cashed-out entrepreneurs and larger firms	Capabilities Access to finance	Mentoring support Startup investments Intelligence on bottlenecks
Entrepreneurial resource providers	PE/VC firms Banks Research institutions Universities Incubators	Access to finance Capabilities Knowledge creation / diffusion	Angel and equity investments Loan guarantee schemes Developing talent Creating knowledge
Entrepreneurial connectors	Professional associations Entrepreneur clubs Entrepreneur deal makers	Market conditions Capabilities	Intelligence on bottlenecks, linking entrepreneurs to new markets, suppliers, sources of finance and advice
Entrepreneurial nurturers	Teachers and schools Media	Culture Capabilities	Teaching entrepreneurial competencies Awareness-raising campaigns

ASEAN member countries should map the ecosystem actors at country level, identify gaps in actors fulfilling important ecosystem functions, and use public co-ordination and incentive functions to encourage the emergence of ecosystem actors in areas of weakness, supporting the public, private and non-profit sectors. For example, policy may support the emergence of venture capital funds and incubators through appropriate funding and co-investment. Policy should also strengthen the capabilities of existing and new actors and increase the extent to which they network with each other. Policy should also consult with ecosystem actors to help assess bottlenecks in each startup ecosystem and the policies needed to further develop the ecosystem and to help build a common vision and networks among them.

4.3 Two potential areas for cooperation at ASEAN level

Policy measures to support startups will benefit from having some cooperation at the regional level. This is because domestic markets often do not offer the market size or supporting resources required to grow at scale. Many high-potential ventures are therefore likely to look to expansion outside national borders, most often to neighbouring countries. Regional initiatives to strengthen startup ecosystems may have the added benefit of levelling the playing field. Examples of cross-national collaborative policy efforts are among others, streamlining visa and residency applications for third country talent (EU Startup Nation Standard), multiplying good practices from one member state to the community as a whole (EU Startup Nation Standard), directing investment and technical assistance to member states that may lack endogenous domestic resources (EU Digital Innovation and Scale-up Initiative (DISC)) and various works by the Pacific Alliance through its Innovation Ecosystem (EIAP) initiative. There are two main areas where ASEAN could cooperate in order to create a vibrant regional ecosystem for startups, namely: *i)* regulatory simplification and harmonisation, and; *ii)* some shared policy processes and information exchange.

Potential co-operation area 1: Regulatory simplification and harmonisation

The regulatory burden highlighted in section 4.1 is greatly increased for firms that wish to operate across borders. This is due to regulatory differences between countries, which can remain a major hindrance to achieving the benefits of the new single market for

scale-ups. For this reason, regulatory simplification and harmonisation is one of the main thrusts of the EU Startup and Scale up Initiative. The study leading to this initiative observed that:

- i. Information about national and EU rules is often dispersed and difficult to digest
- ii. Rules are often overly-burdensome, especially for startups (e.g., to employ foreign workers)
- iii. Setting up a subsidiary is often too burdensome and does not match founder needs
- iv. Taxation and tax compliance costs are often prohibitive
- v. Insolvency procedures give little room for “second chance entrepreneurship,” which reinforces the fear of failure

A set of actions are now being pursued to address these obstacles, such as creating a single EU patent to promote the use of intellectual property rights (IPR) by startups. ASEAN could consider a study of the main regulatory hindrances to scaling a startup across borders, and policies to address them.

Potential co-operation area 2: Some shared policy processes and information exchange

Whilst each AMS should carefully tailor its startup policy package to its specific conditions and objectives, there may also be cost savings and capability gains from shared services and information. For instance, countries could collaborate to: *i*) research startup bottlenecks; *ii*) set goals and key performance indicators (KPIs); *iii*) monitor and evaluate policy impacts (for instance, through peer reviews and econometric evaluation research), and; *iv*) train policy delivery staff. In the latter area on information, countries could: *i*) share information on key national programmes, and; *ii*) share information on national strategies.

5. ASEAN Guidelines on Fostering a Vibrant Ecosystem for Startups across Southeast Asia

These Guidelines are based on international experience and specific challenges faced by AMS. They are directed at policymakers (operating at both the national and subnational level), but roles and responsibilities for other stakeholders have also been identified. They are voluntary in nature.

- **Guideline 1. Establish a policy lead, develop a clear definition, map out a profile of active startups as a starting point, and define overarching objectives**
 - **Establish a policy lead.** It can be difficult to implement a comprehensive startup policy – many agencies may be involved, given the policy’s holistic nature, and this may create duplication, delays, conflicts and confusion. At the same time, startups typically benefit more from policies that can respond quickly to their needs, and that are efficient and clear. One solution could be to mandate an agency or a task force to drive a country’s startup policy at the national level. In countries where this policy is more mature, a lead agency could oversee startup policies and programmes, in order to ensure they are clear, concerted and

holistic. In countries where startup policy is more novel but a priority, a task force could be established, in order to define the country's approach. This should typically incorporate a wide range of stakeholders, who can bring different views to set a vision, and offer different types of support to realise it. For example, in Ireland, responsibility for steering the National Policy Statement on Entrepreneurship was ascribed to two bodies: the National Competitiveness Council for vision setting and strategic approach; and the Department for Jobs, Enterprise and Innovation for overseeing the implementation of this vision.

- **Define the term “startup.”** Startup definitions can vary widely within a country, including across national line agencies, and this may cloud the design and implementation of policy. Adopting a clear definition (even if broad) and securing widespread use of the definition for policy making should help. Some agreement on the broad target of startup ecosystem policy would also help at ASEAN region level.
- **Map out the characteristics and performance of the startup ecosystem.** This mapping exercise should identify bottlenecks and weaknesses in the factors and actors in startup ecosystems as well as measure trends in startup performance. It could also look at quantifying the impact of traits such as gender, age, training and the environment on the emergence and expansion of startups. Making this information publicly available could encourage peer learning and provide market information for various ecosystem players.
- **Guideline 2. Consider startup impact in framework condition policies**

Many countries conduct an “SME Test” to assess the costs and benefits of regulatory – and other forms of reform – on SMEs. Startups tend to be more affected by policy failures and economic cycles than incumbent firms (OECD, 2014a, OECD, 2016a). Once a definition has been established, therefore, policymakers could consider the expected impact of major business environment policy reforms on startups – for instance by running an “SME test,” with a dedicated chapter on startups. They could also consider startup needs in planning other framework condition policies, such as skills development drives. Where startup development is a priority, policymakers could consider integrating a chapter on this into their mid- to long-term national development strategies.

- **Guideline 3. Identify policy priorities and actions for an end to end ecosystem**

For more targeted and strategic measures, policymakers are advised to consider the major bottlenecks holding back startup activity, and to take a holistic approach.

- **Identify the key focus of policy.** This should be based on a careful study of the country in question, as well as, potentially, subnational regions within that country. Since the precise market and institutional failures startups face, as well as country strengths and priorities, will vary, the identification of policy priorities should be based on country-level evidence. However, some international studies can serve as a guide. The Global Entrepreneurship Index, for instance, proposes priority development areas based on a country's level of development (Table 3). It advises factor-driven economies to focus on entrepreneurial attitudes, in order

to stimulate initial activity and foster entrepreneurial aspirations. Efficiency-driven economies, meanwhile, should focus on promoting entrepreneurial activity, for instance through trade liberalisation measures and drawing in capital that could generate knowledge spillovers (for instance, some FDI and through using diaspora networks). Innovation-driven economies, in turn, should focus on providing ever more focused support to promote productive entrepreneurship – e.g., through focusing policy support to specific regions and/or high potential firms (Table 4).

Table 3. Suggested foci for entrepreneurship policy, based on level of economic development

Level of development	Attitudes	Activity	Aspirations
Factor-driven economy	Key focus	Develop	Start enabling
Efficiency-driven economy	Continuous improvement	Key focus	Develop
Innovation-driven economy	Continuous improvement	Continuous improvement	Key focus
Measures	Opportunity perception, startup skills, non-fear of failure, networking, cultural support	Opportunity start-up, gender, tech sector, quality of human resources, competition	Product innovation, process innovation, high-growth, internationalisation, risk capital

Source: Ács and Naudé (2011).

Table 4. Entrepreneurship policy suggestions, based on level of economic development

Level of development	Suggested ecosystem development priorities
Factor-driven economy (Cambodia, Lao PDR, Myanmar) (Brunei Darussalam, the Philippines, Viet Nam)	<ul style="list-style-type: none"> – Establishing authority, capacity and/or legitimacy important to move from fragile to facilitating – Facilitating state aims at establishing conducive business environment (property rights, stability, rule of law, accessibility) – Demonstration of 'basic innovations' that can contribute to development – Basic investment in technology infrastructure – Start addressing broader environment for innovation (education, trade, finance) and industrialisation – Gather data on local indigenous knowledge. – Promote positive attitudes towards entrepreneurship
Efficiency-driven economy (Indonesia, Thailand) Malaysia	<ul style="list-style-type: none"> – Developmental state to use policies to encourage domestic technological capability formation – Use of government procurement for innovation capability building and industrial capacity – Attract appropriate FDI – Develop autonomous innovation promotion institutions / improve the science base – Policies aimed at high-technological innovation – Promote entrepreneurial activities broadly, including through start to promote venture capital – Public R&D to complement and crowd-in private R&D – Trade liberalisation, openness, international research collaboration – Use of diasporas (and reverse the brain drain) – Indigenous knowledge utilise, protect

Level of development	Suggested ecosystem development priorities
Innovation-driven economy (Singapore)	<ul style="list-style-type: none"> - The state promotes basic framework conditions - Substantial focus on innovation, technology, also regional focus - Strengthen research base - Promote entrepreneurial aspirations - Market competition, market development through entry of new entrepreneurial firms is important - Ensure well-functioning venture capital markets - Careful selectivity on potential high-growth entrepreneurship

Note: This table is elaborated in Annex A. Development levels are based on WEF GCI 2017. Countries listed close to the line are those transitioning from one stage to the next.

Source: Ács and Naudé (2011).

- **Identify specific policy actions and targets.** In addressing the chosen policy priority, an assessment must be made of the specific bottlenecks that are holding back achievement of the objective. This will involve both national level startup ecosystem analysis and consultation with key ecosystem stakeholders. Specific policy actions should also consider sector-specific constraints. The regulatory environment may hold special weight for healthcare startups, for instance. Obtaining regulatory approval is typically an essential milestone for these ventures, but the process can be costly and burdensome. Even once this approval has been obtained, many run out of funding before they can generate enough evidence to convince customers. To help address this, the US' Food and Drug Administration established its "Payor Communication Task Force." This initiative draws public and private insurance providers (including Medicare and Medicaid), health technology assessment groups, and others into the pre-submission process and runs parallel reviews with the country's Centers for Medicare and Medicaid Services. It has enabled manufacturers to design clinical trials that can produce the data required by regulators, and has helped to shorten the time between FDA clearance and coverage, procurement and reimbursement decisions. Whilst policymakers should not attempt to overly distort the economy by picking "winning" firms or sectors, they could consider sector-specific barriers that may be holding back otherwise high-potential ventures.
- **Take a holistic approach.** Given the complexity of building up a sophisticated and dynamic startup ecosystem and the porous nature of both innovation and business success, policy efforts should typically be holistic. One targeted intervention is unlikely to be effective if supporting measures have not been taken – for instance, tax breaks to encourage VC investment are unlikely to be effective if exit options for PE/VC investors are inadequate and/or unattractive. Policymakers should therefore seek to assess the "completeness" of the startup overall, and consider supporting measures and necessary pre-requisites in planning targeted interventions. Where possible, policymakers should attempt to simplify and consolidate targeted programmes where they are offered, in order to make access more straightforward for end beneficiaries. By doing this, they may be able to develop more tailored programmes and facilities, which can accompany startups through different stages in their lifecycle.

- **Guideline 4. Acknowledge that progress may be long-run, particularly in younger markets**

Successful startup ecosystems take many years to mature, and policymakers should acknowledge this, expecting their efforts to be long run and not necessarily timed with electoral cycles. Few startups are successful, but those that are, tend to grow very fast. The ecosystem therefore needs to be ready to meet the needs of these enterprises and to maximise potential spillovers emanating from them when they do take off. By taking a long view of what startups and their surrounding ecosystem may need to be successful, policymakers will be ready to provide the right framework conditions and targeted measures when they are needed. If a country begins to develop strengths in the biotech space, for instance, it may need to review legislation on clinical trials in order for companies to adopt global standards.

- **Guideline 5. Build partnerships, particularly between higher and lower middle income countries**

Regional cooperation would enable countries to learn from each other, harmonise framework conditions, and combine resources for policy learning. Regional cooperation could be encouraged through greater policy dialogue in this area, agreement on common concepts, and peer review of startup policies. It could also be encouraged through joint initiatives, as is being done in the EU. For example, collaboration could be achieved in co-investment schemes and participation in fund of funds (the European Investment Group has many good examples of such public investment practices (OECD, 2019a)).

- **Guideline 6. For targeted measures, build competition into eligibility criteria and establish clear exit mechanisms**

Incentives work best when they reach the highest potential and in-need beneficiaries, and are conditional on performance. Eligibility criteria should be broad enough to cover a diverse range of end beneficiaries, but ultimate beneficiaries should be selected on a highly competitive basis. Clear performance conditions should be set and communicated from the outset, and exit mechanisms (including but not limited to) sunset clauses should be built in. In Mexico and Peru, for instance, support has been conditional on beneficiaries generating new businesses and innovations in key national industries (OECD, 2016c). Measures to catalyse VC investment have also proved to be much more effective when exit timeframes and conditions for support are clearly established from the outset (OECD, 2016c).

- **Guideline 7. Continue to test the policy environment for startups, particularly in new and technology-rich sectors, for instance through regulatory sandboxes**

New and technology-rich sectors and firms can feel the impact of regulations, which may reflect established technological and business paradigms and can be slow to change, most acutely (OECD, 2016a). By the same token, these activities can evolve rapidly and policymakers should take efforts to ensure that regulations continue to provide adequate protections. Policymakers should thus be prepared to engage in continuous testing of the regulatory and policy environment for startups and other actors, for instance through regulatory sandboxes. Proportionality –

applying rules proportional to risks posed by the entity's business model and size would generally be a good principle to adopt. In Singapore, for instance, the Monetary Authority of Singapore (MAS) simplified the regulatory regime for VC investors by reducing capital requirements for fund managers, yet they maintained strict anti-money laundering and fitness and propriety checks, in-line with other types of fund (OECD, 2019a). Adjusting regulation too frequently, however, and / or ineffectively communicating adjustments when they are made, may make the operating environment more complicated for businesses and investors.

- **Guideline 8. Engage in regular dialogue and collaborate with the private sector.**

Systematic dialogue with the private sector should boost the relevance of public ecosystem policies, and help both public and private players spot opportunities for collaboration. These efforts should not only target entrepreneurs, but also other ecosystem players, including larger companies. As mentioned previously, large companies often play a central role in ecosystem development. Notable examples include Scitex and Elscint in Israel, Shockley, Fairchild, and HP in California, and Baidu in China. Large companies can help to attract talent, provide seed capital, incubation and / or mentoring as part of open-innovation strategies (OECD, 2016c). Buy-in from the private sector can also help to amplify public policies and boost their impact.

To achieve this, AMS may consider:

- Getting a broad-based view of the market and its challenges by engaging with specialised business associations. Specialised business associations for entrepreneurs and private equity and venture capital (PEVC) investors are becoming more common worldwide, including in Southeast Asia.

- **Guideline 9. Attempt to level the playing field for underrepresented groups**

Certain demographic groups may be underrepresented within the population of startup entrepreneurs but hold much potential for startup development, including women and individuals coming from lower income and/or more rural communities. The reasons for this are many, but could include: a tendency towards being more risk-averse, lower confidence, fewer skills and/or more limited access to resources, a propensity to being less inspired by entrepreneurship, and/or discrimination. A more diverse entrepreneurial population can indicate a stronger ecosystem, which encourages and supports entrepreneurship across a broad cross-section of the population. It may also help to address societal challenges, finding solutions to concrete challenges faced by different communities – for instance the challenges of environment degradation faced by rural communities.

To achieve this, AMS may consider:

- **Ensuring that measures are transparent, inclusive and include provisions tailored to meet the needs of underrepresented groups.** For instance, policymakers could consider factors limiting access to supports, such as geography and/or means of promotion or programme staff attitudes. They could also develop targeted programmes to teach basic business management skills

(for instance, how to market products, negotiate and prepare business plans) and financial literacy, build networks, promote role models, and foster positive attitudes to risk-taking.

- **Ensure that targeted measures are not overly distortive, and subject to review.** Policymakers should ensure that these efforts level the playing field rather than provide unfair advantages to certain groups. They should therefore only be considered where considerable gaps exist, and this need should be subject to continuous review. Efforts should also seek to first improve horizontal policies and tools – for instance by providing better and clearer information on the supports available, and promoting this widely.
- **Guideline 10. Make measurement and monitoring and evaluation (M&E) a cornerstone of policy**

Startup policies can be costly. Measurement, monitoring and evaluation are therefore key. In the design phase, policymakers should set precise KPI metrics for judging the success of their policies and constantly monitor performance throughout implementation. Where possible, robust evaluation of policies and programmes should be conducted post-implementation. These approaches can be very effective – StartUp Chile, for instance, monitors and assesses the impact of its policies at an early stage. One of its assessments showed that too much support was being directed to its capital city (Santiago), and this was hindering linkages between startups and the country's productive sectors, for instance mining and agriculture (OECD, 2016c). As a result, new eligibility conditions were introduced.

To achieve this, AMS may consider:

- **Establishing clear policy objectives.** Many policies do not have a clear objective, or have a multitude of objectives, which can make evaluation difficult.
- **Attempting to gain a picture of the full policy mix.** Chiefly, a clear overview of all policies implemented and potential interactions, and how some instruments may complement or offset each other.
- **Working to enhance data.** Studies often fail to find statistically significant effects due to poor quality data. This can help to widen evaluation scope and improve precision.
- **Going beyond outcomes.** Policymakers should consider different variables that could affect evaluation results – e.g. chosen eligibility criteria, target sample, reference units.
- **Committing to evaluation.** An M&E culture should infuse all stages of the policy cycle, from problem definition and vision setting to evaluating results and adjusting policies.

For example, the Government of Ireland has outlined a comprehensive list of key performance indicators for its National Policy Statement on Entrepreneurship. A few of these are detailed in Box 1.

Box 1. Metrics to assess the performance of startup policy: The example of Ireland

In 2014, Ireland launched its National Policy Statement on Entrepreneurship. The Statement outlines Ireland's priorities and approach to develop entrepreneurial activity in the country, and was developed with strong stakeholder involvement. It outlines 69 policy actions across six themes, namely: *i*) culture, human capital and education; *ii*) business environment and supports; *iii*) innovation; *iv*) access to finance; *v*) networks and mentoring, and *vi*) access to markets. A set of KPIs for each theme and a monitoring system was established. Metrics are recorded against a one-year baseline and the data source is provided. They include:

General business indicators

Metric	Source	Baseline - 2013	Output - 2014
Number of startups	CSO	12 551 (2012)	
Number of business deaths	CSO	18 076 (2011)	
Number of incorporations	CSO	15 506	
Number of liquidations initiated	CSO	1 967	
Survival rates for enterprise at 5 yrs	CSO	48.4%	

Access to markets

Metric	Source	Baseline - 2013	Output - 2014
Number of participants in export awareness programmes	Enterprise Ireland (EI)	655	
Companies engaging with potential exporters division	EI	383	
Number of startups accessing trade acceleration vouchers	InterTradeIreland (ITI)	20	
Number of companies participating in ITI Trade Generation Programme - Elevate - Acumen - Go-2-Tender	ITI	61 59 216	
Survival rates for enterprise at 5 yrs	D/CENR	25	

Innovation

Metric	Source	Baseline - 2013	Output - 2014
HPSUs – innovative startups	EI	104	
Number of spinouts from technology transfer offices (TTOs)	EI	34	
Number of licenses from TTOs	EI	115	
Number of spinouts from SFI research centres	Science Foundation Ireland (SFI)	0	
Number of licenses from SFI research centres	SFI	0	
Horizon 2020 – startups supported	EI	N/A	

Entrepreneurial networks and mentoring

Metric	Source	Baseline - 2013	Output - 2014
No. of startups in accelerators, hubs	Agencies	TBC	
Number of private sector support networks	Industry bodies	TBC	
Mentoring	Agencies		
Mentors assigned to startups	EI LEO	513 1 318	
Monitor private sector commitment to voluntary prompt payment code	DJEI	N/A New initiative	

Culture, human capital and education

Metric	Source	Baseline - 2013	Output - 2014
Culture			
Aspirational entrepreneurs	Global Entrepreneurship Monitor (GEM)	14.7%	
Nascent entrepreneurs	GEM	5.5%	
Total early stage entrepreneurial activity	GEM	9.2%	
Public attitude to entrepreneurship	GEM	50%	
Participation in competitions/awards	Agencies EI	400	
- Student enterprise award applications from third level institutions			
Participation in LEO Student Enterprise	LEO	780 29 359	
- Number of schools - Number of students			
% of females attending core training programmes	LEO	57%	
Human capital and education			
Numbers in entrepreneurship modules across HEIs	DES	Unavailable at publication date	
Performance across STEM	DES	Unavailable at publication date	

Source: National Policy Statement on Entrepreneurship (2014).

Annex A. Stages of country development, entrepreneurship, and ecosystem development suggestions

Level of development	Private sector mode	Innovation system characteristics	Suggested ecosystem development priorities	
Factor-driven economy	<ul style="list-style-type: none"> - Dominance of primary sectors - Specialisation in cash crops, mineral extraction - Spatially dispersed production - Small entrepreneurial base - Largely small, informal and low and minimal technology SMEs 	<ul style="list-style-type: none"> - Innovation may account for only 5% of economic activity - Adoption of existing technology to local conditions main challenge - 'Brain drain' and outflow of skills - Low technology absorption capability - Little private sector R&D - Little incentive for indigenous knowledge commercialisation 	<ul style="list-style-type: none"> - Establishing authority, capacity and/or legitimacy important to move from fragile to facilitating - Facilitating state aims at establishing conducive business environment (property rights, stability, rule of law, accessibility) - Demonstration of 'basic innovations' that can contribute to development - Basic investment in technology infrastructure - Start addressing broader environment for innovation (education, trade, finance) and industrialisation - Gather data on local indigenous knowledge. - Promote positive attitudes towards entrepreneurship 	
Efficiency-driven economy	<ul style="list-style-type: none"> - Manufacturing sector grows - Greater product diversification - Larger firms, SOEs and MNEs start to dominate - 'Fordist' production by obtaining productivity growth through economies of scale - Growing spatial clustering and urbanisation - More technology competent enterprises 	<ul style="list-style-type: none"> - Innovation becomes more important and could contribute to around 10% of economic activity - Growth in private and public sector R&D - IPR protection becomes more important 	<ul style="list-style-type: none"> - Developmental state to use policies to encourage domestic technological capability formation - Use of government procurement for innovation capability building and industrial capacity - Attract appropriate FDI - Develop autonomous innovation promotion institutions / improve science base - Policies aimed at high-technological innovation - Promote entrepreneurial activities broadly, including through start to promote venture capital - Public R&D to complement and crowd-in private R&D - Trade liberalisation, openness, international research collaboration - Use of diasporas (and reverse the brain drain) - Indigenous knowledge utilise, protect 	
Innovation-driven economy	<ul style="list-style-type: none"> - Rise in services sector share in GDP - High value-added manufacturing activities dominate with greater specialisation - High tech clusters stabilises and R&D rich firms to be found - Re-emergence of (advanced) small businesses on both national and international markets 	<ul style="list-style-type: none"> - Knowledge becomes the main driver of growth - Innovation can contribute to more than 30% per cent of economic activity 	<ul style="list-style-type: none"> - Substantial focus on innovation, technology, also regional focus - Strengthen research base - Promote entrepreneurial aspirations - Market competition, market development through entry of new entrepreneurial firms important - Ensure well-functioning venture capital markets - Careful selectivity on potential high-growth entrepreneurship 	<i>Ács and Naudé definition</i>

Level of development	Private sector mode	Innovation system characteristics	Suggested ecosystem development priorities	
	<ul style="list-style-type: none"> - Opportunity driven entrepreneurship - Non-R&D innovation expenditure - Business Expenditure R&D - Private co-funding of public R&D expenditures - Innovative enterprises collaborating with others - Enterprises with product or process innovations - Enterprises innovating in-house - VC investments 	<ul style="list-style-type: none"> - Employment in knowledge-intensive activities - Sales of new-to-market and new-to-firm product innovations 	<ul style="list-style-type: none"> - The state promotes basic framework conditions, such as in the areas of Human Resources, attractive research systems, innovation-friendly environment - Emphasis on providing finance and support and firm investments - Encourage innovation activities amongst innovators, collaborations with others and development of intellectual assets - Have impact on either employment or sales 	Select indicators and foci based on the EU SII⁶

Source: Ács, Z., Naudé, W. (2011), *Entrepreneurship, stages of development, and industrialization*; EC (2020), *European innovation scoreboard*, accessed via: [https://ec.europa.eu/growth/industry/policy/innovation\(scoreboards_en](https://ec.europa.eu/growth/industry/policy/innovation(scoreboards_en).

⁶ Ten of the 27 EU Summary Innovation Index (SII) indicators were selected by the ACCMSME as proxies to measure the effectiveness and impact of an economy's innovation performance. The SII is a composite indicator measuring the overall performance of each economy's innovation system. It consists of four focus areas across ten innovation dimensions with a subset of 27 indicators. The SII offers the advantages of being a simple and easily understood dashboard to capture innovation performance across time and offer comparability against other economies.

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