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Backing Startups and Believing in Unicorns: Policy Implications and Challenges for Malaysia

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Three incubators have been established in Malaysia to spur innovation. The Technology Park Malaysia (TPM) Incubator (pictured above), situated within the vicinity of TPM Science Park vicinity is one of the three. Source: Screen capture from the YouTube of Technology Park Malaysia (TPM) Corporate Video.

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EXECUTIVE SUMMARY

- The Malaysian government's aspirations to nurture startups and unicorns can be traced back to the establishment of its Multimedia Super Corridor (MSC) in 1996.

- This was to be accomplished through the establishment of incubators and accelerators and the provision of early-phase funding in a decentralised manner to meet the needs of startups from the inception of ideas to their development and subsequent commercialisation and expansion.

- There is uncertainty whether the government funding of startups has been effective, given the lack of proper assessment of incubator and accelerator performance. It is also far from clear whether the progress and current status of the startups are commensurate with the money spent.

- Assessments of incubator and accelerator performance in other countries have shown a critical reliance on good data. The UK's experience, for example, points to the need to make data sharing obligatory for incubators and accelerators that have received or are receiving public funding.

- Designing an assessment framework which can be applied across different incubators and accelerators, however, requires the identification of appropriate performance metrics that should be used.

- While it may be expected that incubators, accelerators and funders should assess their own impact, in reality they often do not have the time nor the resources to do so. Hence there is scope for independent researchers to play a vital role in this regard, but this can only be done if data is shared with them. The data-driven insights gained from such assessments would be invaluable for the improvement of future programmes and funding processes.

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INTRODUCTION

Startups are pursued as potential new drivers of growth through their innovativeness and use of new technologies, in the belief that these can open new markets for new products and services and generate new employment for the country. For these reasons, Malaysia has been pursuing startup development since the inception of the Multimedia Super Corridor (MSC). MSC was established in 1996 as a testbed to spur the country's information, communication, and technology (ICT) development. The MSC programme accorded tax advantages for MSC-designated firms which were initially to be located within Cyberjaya in the hope that it would grow into an ICT cluster.

To spur innovation, three incubators have been established. They are: MSC Central Incubator (MCI), which is in Cyberjaya itself; Technology Park Malaysia (TPM) Incubator, which is situated within the TPM Science Park vicinity, and Universiti Putra Malaysia-Malaysian Technology Development Corporation (UPM-MTDC) Incubator, which is operated within the UPM main campus in Serdang.[1] These incubators provide physical space and some resources for early-phase startups that are in the product development phase and do not have a developed business model. Funding was subsequently provided when Cradle was incorporated under the Ministry of Finance Malaysia (MOF) in 2003 to fund potential and high-calibre tech start-ups. via its investment programs, which includes commercialisation support, coaching and other value-added services for entrepreneurial development. Over time, more incubator and accelerator programmes were added alongside greater funding from the government, as more ministries and agencies joined in the race to produce startups.

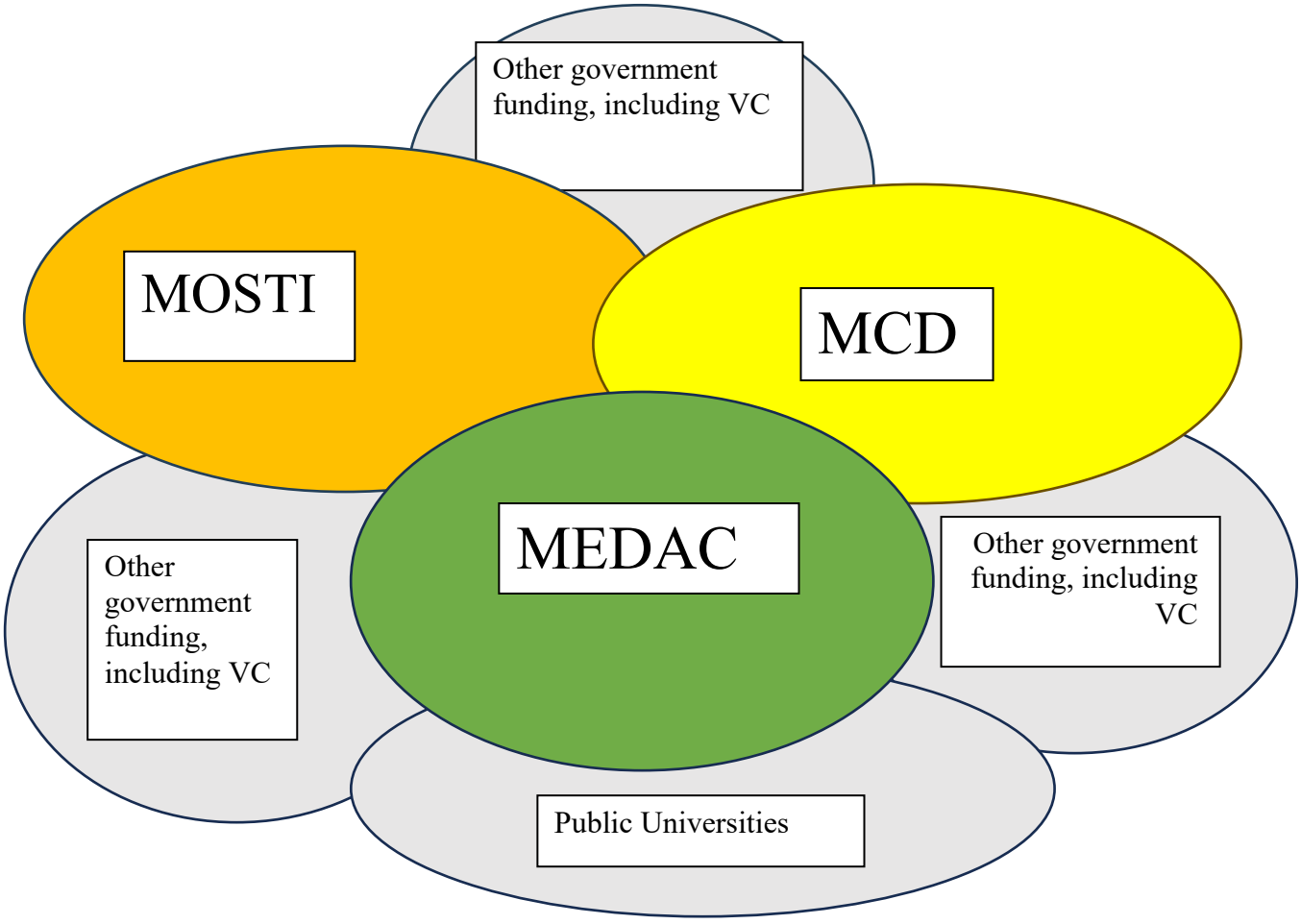
Startup ambitions were later consolidated into Malaysia's Digital Economy Blueprint, which was launched in February 2021. The Blueprint targeted 5000 startups and two unicorns by 2025, subsequently raised to *five* unicorns.[2] A Roadmap (or Malaysian Startup Ecosystem Roadmap (SUPER), 2021-2030) to achieve this was launched in November 2021.[3] SUPER is housed with the Ministry of Science, Technology, and Innovation (MOSTI). MOSTI defines a startup as "a technology or innovation enabled business at an early stage, with a scalable business model and a high growth strategy." In 2022, Malaysia had 3,363 start-ups and one unicorn, namely Carsome, which is an integrated used-car platform. But there are no historical data as to how much this number has grown since the inception of the MSC in 1996.

Over time, other incubator programmes were introduced, including in public universities. Accelerator programmes for speeding up the growth of existing companies that already had a minimum viable product (MVP) via dedicated mentoring, networking, and financial support, were also added. There is also funding outside of these programmes. This is to meet the desired exponential growth in untested ideas and products. This paper traces the development of government-funded incubators and accelerator programmes and startup funding in the country. It also identifies the key challenges these government-supported programmes and funding structure face.

PROFILING INCUBATORS AND ACCELERATORS

According to SUPER, there are 28 accelerators/incubators backed either by the government or the private sector. At the federal level, the three key ministries running accelerator programmes are the Ministry of Science, Technology, and Innovation (MOSTI), the Ministry of Communications and Digital (MCD) and the Ministry of Entrepreneurship Development and Co-operatives (MEDAC), with funding from the Ministry of Finance (MOF) (Figure 1 and Appendix 1 for details).

Figure 1. Key Ministries, Programmes and Funding for Startups in Malaysia, 2023.



Note: Figure does not represent size of programmes or funding.
Source: Author

These programmes share several key features. They have specific objectives, albeit these tend to evolve over time due to changing policy priorities. For example, the pivot from ICT to all-things-digital took place when Multimedia Development Corporation (MDC), which was established to oversee the development of the MSC, was rebranded to Malaysia Digital

Economy Corporation (MDEC) in 2016. MDEC's accelerator programmes thereafter started to focus on digital startups.[4]

While the programmes may differ in sectoral focus, there can be overlaps. The bioeconomy accelerator programme,[5] for example, focuses on bio-based startups in the agriculture, industrial and health sectors. Likewise, MRANTI Park also focuses on agriculture, health and bioscience, in addition to drone technology and IR4.0.[6]

The programmes cover startup development from pre-seed to seed, and from early-stage to commercialisation stages. However, World Bank's identification of funding gaps has spurred a reorientation towards early-stage startups, leading MOSTI to launch MYStartup Pre-Accelerator programme in 2022.[7] MYStartup Pre-Accelerator focuses on pre-seed and early-stage start-ups, providing guidance and coaching to help them unlock their value and potential.

Collaborations are common across institutions while public-private partnerships in accelerator programmes have also increased over time. This can be observed in many MDEC programmes, which have included partnering state level programmes and with private accelerators as well.

In view of the looming 2025 deadline, targeted programmes have been launched to stimulate the birth of unicorns. This includes the launch of the 100 Soonicorns programme in 2022, where soonicorns are defined to be unicorns in the making.[8] The programme aims to identify 100 soonicorns, out of which 20 will be selected for tailored learning, mentoring, regulatory assistance, and funding from investors which include government agencies as well. In 2023, MDEC launched another new mentoring programme, called the Founders Center of Excellence' (FOX) Program, which targets high growth tech companies with potential to become unicorns or achieve an IPO by 2025.[9]

Research universities and government research institutes also host incubator programmes in collaboration with Malaysian Technology Development Corporation (MTDC), although two of the oldest research universities, namely University Malaya and Universiti Sains Malaysia have opted to do so independently or with different collaborators. There are also private incubators such as MAD (Make-a-Difference) incubator,[10] which aims to work with bigger private universities like Help University. Unfortunately, there is no list of private incubators available and start-ups may encounter difficulties seeking out these incubators.

There are also special channels for Bumiputeras such as Teraju's programme to support Bumiputera startups, which ran from 2014 to 2021.[11] SME Corp also has several programmes for Bumiputeras. Since these programmes are also dependent on government funding, some of them have been terminated when their funds dried up or when new allocations have new priorities. For example, the Business Accelerator Program of SME Corp is currently closed.

At least three states have publicly announced their respective accelerator programmes, with the Selangor programme being the oldest. The Penang state government is collaborating with private players, while Sarawak's is driven by Digital Sarawak.

Petronas, a government-linked company, has also launched an accelerator programme which has five focus areas related to the interests of the company. These are naturally tied to future areas that can impact the direction of the company, such as sustainability concerns, the future of chemicals and materials, and the future of energy and mobility.

Private accelerators also exist but the exact number is not known. Six of the best-known work collaboratively with MDEC, namely WatchTower and Friends, Scaleup Malaysia, 1337 Venture Accelerator, PwC, Nexea and Sunway ILabs Super Accelerator. Global Accelerator Programs such as the one hosted by Alibaba are also available in Malaysia.[12] Notable among the private accelerators is the collaboration between Carsome, Malaysia's first unicorn that was minted in 2021, and SunwayiLabs, a private accelerator, to run a programme that focuses on funding, supporting and scaling up startups that potentially disrupt the automobile ecosystem.[13]

KEY CHALLENGES

Programme Assessment

The outcome of all these government incubators and accelerator programmes, when reported publicly, is usually in the form of the number of participants of an event or the number of startups who completed the programme. Cradle, which has been running incubator and accelerator programmes since its inception, was reported to have approved 486 projects totalling RM191.94 million, from 2011 to 2020.[14] Cradle commissioned a study in collaboration with Help University in 2017 to study the impact of Cradle programmes on the economy.[15] The study, which has not been released to the public, reported that in 2018, Cradle's initiatives had contributed US$838 million (RM3.4 billion) to the country's Gross Domestic Product (GDP) and created 80,600 full-time jobs. A total of US$321 million (RM1.3 billion) in private and foreign funding was attracted into the Malaysian technology ecosystem during the eight-year period. The number of startups that dropped out or continued to grow after participating in the programme was, however, not reported.

Data are sparse if available at all, on the subsequent development of the startups that have participated in any of these programmes. In particular, university incubators are usually assessed for publication purposes. For example, Ng et.al. (2019)[16] compared Malaysia's University Incubators (UI) with Taiwan's and found that Malaysia's UI are not only younger but also lacking in institutional culture, socio-technical networks, and financial and human capital, making them less effective than Taiwan's. Importantly, since the promotion of academic staff is tied to publication, they are much less 6ncentivized to search for startup opportunities through these incubation programmes; efforts to commercialise university research therefore remain elusive.[17]

MOSTI's MyStartup first Annual Report 2022 may pave the way for a new way of reporting as it provides some details on the programmes conducted under this platform.[18] These programmes are outlined with some data on participation in terms of the number of applicants and the number selected, and some testimonials and illustrative success stories. Testimonies, while valuable, cannot substitute for a survey on user perception of the value of the programmes

or an appraisal on whether the support provided has indeed enhanced the longer-term survival and growth prospects of startups. Such an appraisal can provide invaluable feedback for improving programmes. There is, however, scarce information on whether the numerous programmes have been assessed for improvements, not to mention that on the metrics used.

In particular, there is no comparison between government-supported startup survival and the long-term development of private incubator and accelerator-supported startups, based on specific outcome measures. Further comparison with non-supported startup development is essential if one is to understand the value and influence of government incubator and accelerator programmes.

Funding beyond incubator and accelerator programs

Besides funding incubator and accelerator programmes, there is also funding available that is not tied to these programmes (Figure 1). This is because mega-size funding is critical for scaling up the development and success of startups. Grab, for example, was founded in Malaysia by Malaysians and received initial funding support from Cradle. But when it grew bigger, much more funding was needed for it to grow exponentially and Grab was apparently unable to access this funding in Malaysia. It was subsequently persuaded by a Singapore venture capitalist to move its headquarters to Singapore in 2014 and it was later listed on NASDAQ in 2021.[19] In contrast, Carsome, Malaysia's unicorn, stayed on in Malaysia and could grow to its present scale after managing to obtain funding from a partnership between Gobi, a private venture capital company, and Malaysia Venture Capital Management (MAVCAP), in 2016.[20]

Hence, beyond the funding provided through incubation and acceleration programmes, additional funding is available. This is also not centralised and is instead distributed across different ministries and agencies, which diffuses the amount available for each startup. The funds are mainly in the form of grants, loans, and incentives. There is also peer-to-peer funding (P2P) funding (or borrowing directly from individuals) and equity crowdfunding, which is the collecting of smaller sums of money from a larger number of investors, organised by one of these agencies. In particular, there are also several government-owned firms that aim to provide venture capital. MAVCAP was established in 2001 under the MOF, with the mandate of developing the venture capital sector, and it is one of the largest VC firms in Malaysia. It operates under the purview of MOSTI. The government has also increased its efforts to bring in private venture capital through partnership with the government, for high risks investments. Specifically, the Ministry of Finance (MOF), apart from providing funding for programmes and other funding agencies, established Penjana Kapital in 2020 with a RM600 million investment fund to promote public-private partnership; it is a matching fund-of-funds programme wherein funds raised by foreign and private local investors are matched 1:1.

In 2022, Securities Commission Malaysia showed that government agencies contributed 36.01% of the country's venture capital, followed by sovereign wealth funds (27.7%), while corporate investors contributed 22.68%,[21] indicating a continued dependency on government and government-linked funding. The private venture capital market is still considered underdeveloped. In part, Malaysia is relatively less attractive because its domestic market is

relatively small and scaling up requires firms to have a global mindset from the start and to be able to tap on the regional market, which in turn depends on their access to funding. Carsome for example, relied on several rounds of funding to expand from Malaysia to Indonesia, Thailand, and Singapore. The regional market, on the other hand, is difficult to penetrate due to the prevalence of non-tariff measures, especially in terms of standards used, imposed in each country.[22]

The availability of numerous funds does not necessarily imply that they are easily accessed as there is little accountability on the use of these funds or their effectiveness. Instead, Malaysia startups continue to face funding problems; World Bank (2022)[23] found that in proportion to its GDP share, Malaysia's VC activity is relatively low, indicating that it is performing below its potential in this respect. In addition, Malaysia's average deal size for seed funding is comparatively low as compared to its regional peers, indicative of a lack of high-quality investment opportunities.

CONCLUSION

Malaysia's aspirations to nurture startups and unicorns can be traced as far back as to the establishment of the MSC in 1996. The government has since established numerous incubators and accelerators to facilitate the growth of these firms, with the participation of different ministries, agencies, and government-linked companies. Funds have likewise been provided each year in a similarly decentralised manner to meet the funding needs of startups from inception of ideas to growth and subsequent commercialisation and expansion. However, the lack of proper assessment of incubator and accelerator performance and of the effectiveness of government funding lends uncertainty as to whether the current stage of development of startups is commensurate with the money spent.

Assessments of incubator and accelerator performance in other countries have shown good data is needed. The databank on startups in Malaysia is poor and spread across several Ministries and agencies. It is important to take a leaf from the UK study[24] where it is suggested that data sharing should be made obligatory for incubators and accelerators that have received or are receiving public fundings.[25]

Designing an assessment framework and working across different incubators and accelerators require identifying a set of appropriate performance metrics to be used. It is crucial that Malaysia moves away from simplistic performance metrics such as number of participants, number who selected for attending the programmes and number who graduated from programmes.

The performance measures must be meaningful in the short-term as benchmarked against the activities and results of the programmes. It should also measure the sustainability of the startup. Likewise, assessing the impact of funding should focus on meaningful metrics that can measure performance outcomes attributable to funding received. Identifying the appropriate performance measures and collecting the relevant data are a crucial step forward.

It may be that incubators, accelerators and funders should assess their own impact, but more often than not, they do not have the time or the resources to do so. It is important therefore for data to be shared with independent researchers. Data-driven insights can be gained from this for the improvement of future programmes and funding processes.

Appendix 1. Federal and State Incubators and Accelerators, 2023

Ministry and agency	Programs
MOSTI	
• CRADLE	MyStartup (pre-accelerator program) https://www.mystartup.gov.my/accelerator
• MRANTI	Global Accelerator Program https://mranti.my/global-accelerator-programme MRANTI Impact Challenge Accelerator Program https://mranti.my/solutions/scaling-up-market-ready/mranti-impact-challenge-accelerator-mica
• Bioeconomy Corporation	Bio-Based Accelerator Program https://www.bioeconomycorporation.my/industry-development/bio-based-accelerator-programme/overview/
MCD	
• MDEC	SME Digital Accelerator Program https://mdec.my/digital-economy-initiatives/for-the-industry/sme-digital-accelerator GAIN (seven accelerator partners, which are either state or private programs) https://mdec.my/gain/accelerator-programs Malaysia Tech Entrepreneur Program (MTEP), https://mdec.my/about-mdec/digital-economy 100 Soonicorns Program https://www.kkd.gov.my/en/public/news/23065-100-soonicorns-launched-to-expand-unicorn-club-in-malaysia FOX program https://www.digitalnewsasia.com/startups/malaysias-unicorn-target-centres-around-mdecs-fox
MEDAC	
• SMECorp	PRESTIGE https://www.smecorp.gov.my/index.php/en/programmes1/2015-12-21-09-53-14/prestige
• Teraju (for Bumiputeras only)	SUPERB (2014 -2021) https://superb.teraju.gov.my/home https://vulcanpost.com/766347/teraju-superb-2021-bumiputera-startup-accelerator/

• With Malaysian Technology Development Corporation (MTDC)	I4.0 Accelerator Programs https://mytap.com.my/program_TAP-SME.php
• Seven Public Universities; four with MTDC	https://www.mtdc.com.my/technology-centre/ USM: Centre for Innovation and Consultation (CIA) in collaboration with Western Digital https://innovations.usm.my/ https://www.nst.com.my/news/nation/2021/01/657929/western-digital-usm-unveil-centre-innovation-and-automation University of Malaya Centre of Innovation & Enterprise (UMCIE) https://umcie.um.edu.my/our-location
Selangor state	Selangor Accelerator Program (5th cohort) https://www.sidec.com.my/sap2022/
Penang state	Penang Startup Accelerator Program (together with private) https://pydc.com.my/en/psap/
Sarawak	
• Sarawak Digital Economy Corporation (SDEC))	Digital Village Accelerator https://diva.sarawak.digital/
• Tabung Ekonomi Gagasan Anak Sarawak (TEGAS)	https://dayakdaily.com/tegas-to-groom-5-startups-in-its-startup-lab-accelerator-programme/
• Petronas	Future Tech Accelerator Program https://www.petronas.com/ventures/futuretech-accelerator/

Source: Compiled by author

ENDNOTES

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[21] Venture Capital and Private Equity (sc.com.my)
[22] See ERIA https://www.eria.org/news-and-views/eria-and-unctad-discuss-joint-work-on-ntms-in-asean-and-east-asia/
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