

Introduction: *From Desert to Rainforest: A Crucial Decade for the Island of Startups*

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Abstract

2011-2021 was a crucial decade for Taiwan's startup ecosystem. Started out as a desert, lack of resource, it sprouted gradually and startups began to emerge on the international stage. *From Desert to Rainforest: A Crucial Decade for the Island of Startups* combs through related policies and literature, conducts in-depth interviews with 22 contributors to Taiwan's startup ecosystem, and analyzes their perspectives. The book looks back at key changes as Taiwan's startup ecosystem started from scratch, and looks to future opportunities and challenges.

The book also points out that key actors adopted the concepts of startup ecosystem in the early 2010s, which led to the rise of the startup community in Taiwan. In terms of resource matchmaking, intermediaries collaborate with the government, companies, and supportive organizations to assist startups as they grow. As a result, close community relationships are developed. From a policy perspective, starting in 2014, the government has not only introduced numerous industry policies and improved the regulatory environment, but also transitioned to the role of matchmaker, providing guidance, and attracting investments in startups or promoting startup hubs. Furthermore, the amount of early investments bounced back and their sources of capital became more diverse. How to attract more international attention and let investors in each stage work together has since become a new challenge.



From the perspective of companies and startups, Taiwanese enterprises have been actively seeking to collaborate with startups through accelerators and venture capitals, and have brought in capabilities of external startups. Meanwhile, many iconic startups in Taiwan have entered an important stage of international expansion, and are looking to find suitable paths for internationalization in the field of "software services" and "software and hardware integration." However, they continue to face challenges of landing in overseas markets and adapting to local culture.

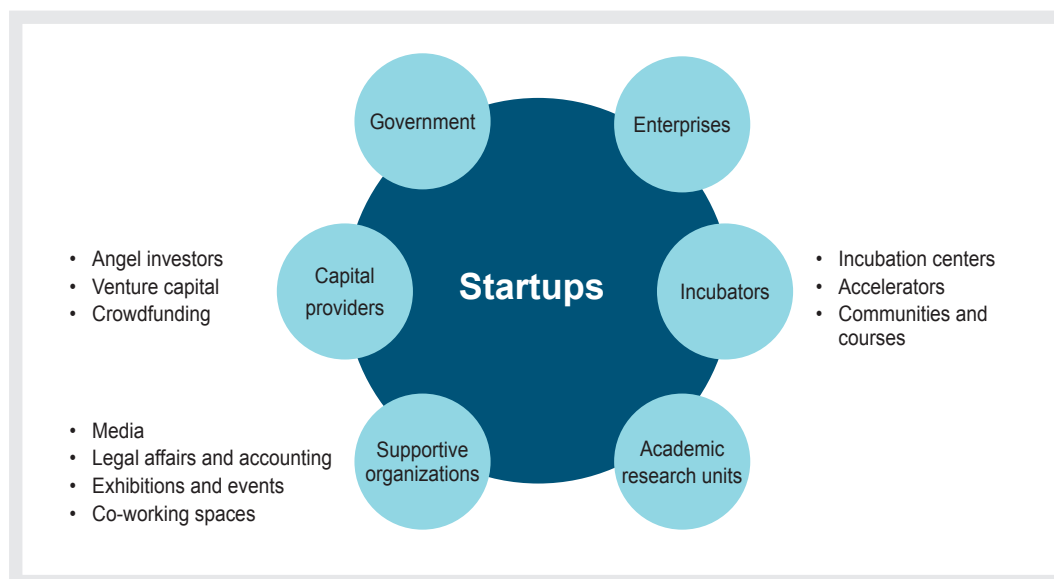
Looking to the future, "startup recirculation" has already emerged in Taiwan, symbolizing the evolution of the ecosystem. Nevertheless, it is still necessary to drive comprehensive changes to transform and become embedded in international systems. In the midst of a global market reshuffling and soaring of technological innovations, is Taiwan fully prepared to seize the opportunities for transformation and truly become an island of startups?

Introduction

Taiwan has always been booming with entrepreneurship. Startups that successfully expanded to the international market in different eras were often the driver of industrial transformation, creating momentum for Taiwan's economic development. There was a wave of tech startups in Taiwan in the 1990s that later developed into the high-tech industry we know today. Good times don't last long, however, and tech talent and capital rapidly flowed out of Taiwan in 2010 after the dot-com bubble burst and due to the impact of the financial crisis. Taiwan not only missed out on the global trend of Internet startups, but also hit rock bottom and the overall entrepreneurship environment became a desert.

The period from 2011 to 2021 was a crucial decade for Taiwan's startup ecosystem, which sprouted gradually, and startups began to emerge on the international stage. The book *From Desert to Rainforest* combs through related policies and literature, conducts in-depth interviews with 22 contributors to Taiwan's startup ecosystem, and analyzes their perspectives. The book looks back at key

changes as Taiwan's startup ecosystem started from scratch, and looks to future opportunities and challenges, hoping that the "island of startups" can cultivate an entrepreneurship ecosystem as lush as a rainforest.



Growth of the startup community and transition of the government's role

The startup community created the initial momentum for the development of Taiwan's startup ecosystem. During the early 2010s, key actors in the private and public sectors attempted to introduce new concepts and methods, such as entrepreneurship competitions, entrepreneurship education, and accelerators, based on common beliefs, and it seemed to start a cultural movement that led to the development of the startup community.

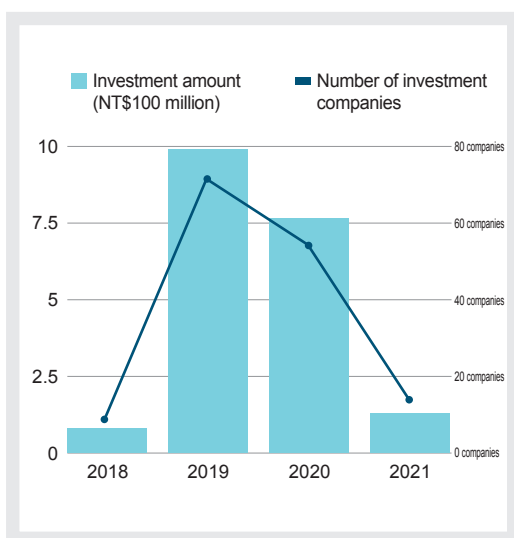
The book looks closely at matchmaking resources, such as incubators and accelerators, in which "intermediaries" are important contributors that collaborate with the government and enterprises to assist startups as they grow. According to data from the Taiwan Institute of Economic Research, there are currently over 60 accelerators in Taiwan, and the number peaked in 2018 due to the trend of corporate



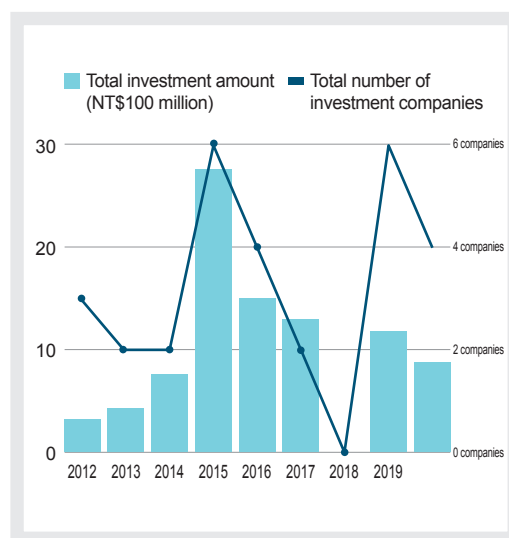
startup engagement. In another aspect, the large number of incubators that operate as non-profit organizations utilize their wide range of connections and mentor resources to accelerate the growth of startups. Furthermore, the involvement of exhibitions and events, associations, and legal affairs and accounting units gradually developed a diverse and close startup community with intensive exchanges in Taiwan.

The government's transition and inputs also made important contributions to the development of Taiwan's startup ecosystem. "Innovation and entrepreneurship development" was included as a comprehensive cross-departmental policy around 2014, with "HeadStart Taiwan" as an important watershed. Taiwan's government subsequently launched the major cross-departmental industry policies "Asia Silicon Valley Development Plan" (2016), "Action Plan for Enhancing Taiwan's Startup Ecosystem" (2018), and "Asia Silicon Valley Development Plan 2.0" (2021), in which innovation and development were at the core of the policies. The policy systems for startup incubation and technology policy that had been in place for years were also integrated and transformed. The regulatory environment for startups started in 2017, and relatively intensive amendment results began to appear in industry-academia connections, talent recruitment, and fundraising for startups.

Another important change was the government's gradual transition to the role of matchmaker and guidance provider, whether it may be to guide market capital to invest in startups or promote entrepreneurship clusters. The government also collaborated with private actors and formed new public-private partnerships. Taking the National Development Fund (NDF) as an example, the "Angel Investor Project" (2012) directly invested in startups, and the "Angel Investor Program" (2018) matched venture capitalists and angel investors to jointly invest in startups. As for entrepreneurship clusters, there are nearly a hundred startup bases or parks supported by the government, including Taiwan Startup Stadium, Taiwan Innovation and Entrepreneurship Center, Startup Terrace Linkou, and Startup Terrace Kaohsiung, which receive assistance of resource matchmaking from the government, allowing them to become a key gateway to the world.



National Development Fund Angel Investor Program: Investment Amount and Number of Investment Companies



Amount Invested by the National Development Fund in Startups and Number of Startups Over the Years

Capital growth and the trend of corporate startup engagement

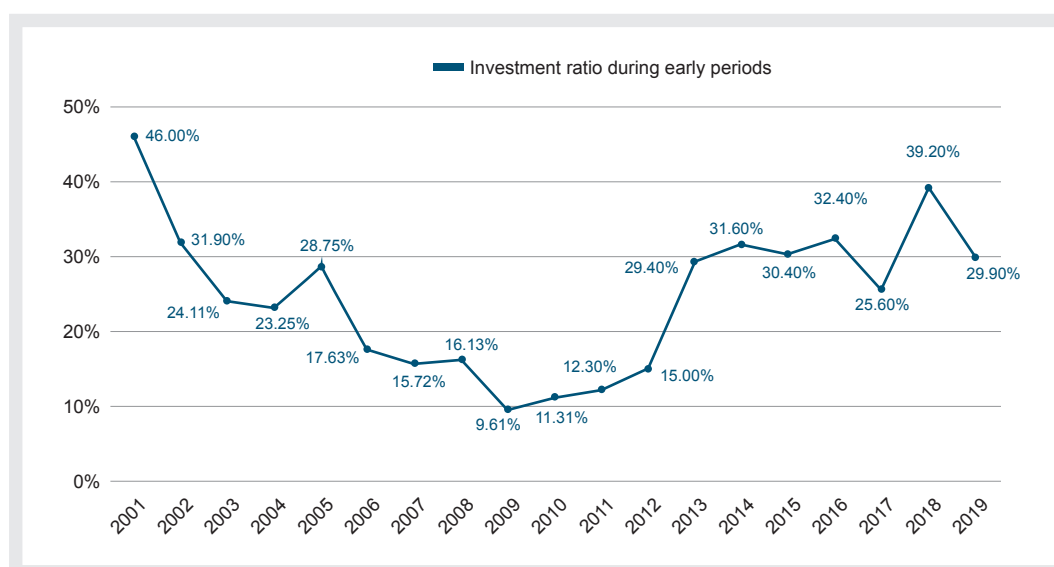
The growth of early-stage capital is another key change. Startups in Taiwan originally had trouble finding funding. The startup ecosystem in Taiwan has endured a cold harsh winter in terms of funding, but spring is coming. The investment ratio significantly bounced back after the venture capital industry hit rock bottom due to the cancellation of tax incentives, bursting of the dot-com bubble, and the financial crisis. The government utilized policy channels, such as the NDF, to effectively channel considerable funds.

The background of capital providers also became more diverse. Due to the relaxation of regulations, Taiwan's venture capital industry received funding from diverse sources in the financial sector, such as securities firms, financial holdings companies, and commercial banks, after 2016. Investments from enterprises also began to increase, and showed the most significant growth in terms of number of investments and investment amount in startups in Taiwan since 2015. Other capital providers such as angel investors and private equity funds also gradually appeared.

However, Taiwan's startups still need more attention and participation from global investors. As capital and capacity return, how to ensure the connection and division of labor by specialization between capital providers in each phase became a new issue.

Furthermore, Taiwanese enterprises have faced issues with market saturation and digital transformation in recent years, and began to seek cooperation opportunities with startups, bringing in fresh ideas through external innovation. Starting from trial production and charity sponsorship, corporate accelerators and corporate venture capital (CVC) gradually appeared after 2015. Corporate accelerators became the mainstream after 2016; currently, they account for approximately 40-50% of all accelerators. Furthermore, the operations of corporate accelerators are commonly outsourced. Most investments by Taiwanese enterprises in startups are strategic investments, and direct investments are the mainstream. Investments in external venture capital or establishing CVC are still developing.

Enterprises' engagement with startups reflects that Taiwanese startups are forging ties with various industries, creating new opportunities for industrial innovation. However, matchmaking is often only the beginning because it involves the



Changes in Investment Ratio During Early Periods in Taiwan

long-term transformation of enterprises. Enterprises need to adjust internal decision-making mechanisms and comb through their business strategies. Participation of enterprises in startups cannot be completed in one step, and should be implemented in phases, or seek assistance of third party consultants and coordinators at the right moment.

Exploring and deepening international connections

After introducing the overseas startup model, Taiwan's startups entered the growth and international expansion phase in 2014-2015 and sought development overseas, in which the most representative markets were Japan and Southeast Asia. At the same time, government and private organizations also provided assistance with connection and matchmaking. After 2014, government departments listed international connections as a policy goal, and increased the international exposure of Taiwan's startups through incentives of the overseas talent system, startup spaces for matchmaking with overseas resources, and media, communities, and exhibitions. Calls to gain international exposure through the branding of Taiwan's startup ecosystem appeared within the ecosystem around 2018. The National Development Council (NDC) proposed the national startup branding project Startup Island TAIWAN, while private sector already had an international perspective from the scale of events to market positioning, and adopted global strategies based in Taiwan.

Summarizing the perspectives of subjects in each field, Taiwan's startups generally face issues with application in overseas markets and adaptation to local cultures. Besides obtaining capital, startups need to learn to build an effective international network and adjust organizational cultures. In response, deepening connections with overseas investors or investors with an international perspective will provide great benefits. Taiwan's startups have begun to form international connections, yet there is still potential to strengthen these ties.

Trends in the startup industry

In terms of industry trends, the book reviews seven most popular keywords in Taiwan's startup industry after 2015, and adopts a unique approach by using big data analysis to show the heat map of each industry's share of voice over the years, gaining valuable insights into unique trends. Taiwan's startups have actively explored the development path of each industry, often before policy arrangements, which showed the private sector's great capacity for innovation. Furthermore, the book also observes that Taiwan's startup ecosystem originally kept pace with the world in many industries, but their subsequent developments were different, showing that startups were ahead of market trends, but resource constraints may have caused them to miss out on opportunities.

Observing the business models of Taiwan's successful startups, "software services" and "software and hardware integration" are the most representative models. Regardless of the field that startups are in, finding an internationalization path suitable for their field is the key to success. The development and operations of software service startups are not constrained by time and place, making the development model of "looking towards the world based in Taiwan" a possibility. Teams must develop an international team culture and begin to explore overseas markets to find potential partners. Software and hardware integration startups often utilize Taiwan's hardware advantages and control niche markets through global strategies. The startups quickly enter existing industry systems by working with key international customers and forming strategic alliances, in order to drive market changes.

Startup recirculation and further internationalization

Similar to a startup, the startup ecosystem needs to constantly evolve and find its advantages. The book points out that the phenomenon "startup recirculation" has

appeared in Taiwan: Startups that successfully gain a firm foothold slowly begin to work with the next generation of startups, passing on experience, and combining resources. Quite a few serial entrepreneurs start their second and third businesses. However, there is an insufficient number of entrepreneurs in Taiwan who have gone through all phases of entrepreneurship. As recirculation starts, it is still necessary to accelerate iterations to achieve international standards.

According to the Global Startup Ecosystem Report (GSER) 2020, Taiwan's startup ecosystem is currently in the activation phase and needs to focus on industries it has an advantage in. Taiwan's startup ecosystem needs to continue increasing its early stage capital and number of startup teams to move towards the internationalization phase. This means that members of the ecosystem in each field need to drive changes and accelerate international participation while looking towards global talent and investors. Only changes in multiple aspects can transform the environment and let the ecosystem become fully embedded in the global startup ecosystem. Today, an active startup ecosystem is not only related to "startups," but also symbolizes the successful transformation of Taiwan's economy and becoming aligned with international standards. In fact, now is an excellent time for Taiwan's transformation. After missing out on the soaring Internet and mobile industries after 2010, Taiwan currently has a window of opportunity not seen in years following the reshuffling of the global market and the development of innovative technologies, such as 5G, AIoT, and blockchain. After years of preparation, several iconic startups are currently going public and entering the international development phase, significantly increasing Taiwan's overall international visibility. However, is Taiwan, the "island of startups," prepared to seize opportunities from the ongoing international transition? 🤖