

Policy Recommendations on Startup Ecosystem Ecosystem Expansion and Globalization

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Executive Summary

This policy proposal summarizes measures to promote the internationalization and globalization of the startup ecosystem in Japan, based on the results of research conducted by the University Industry and University Society Partnership Research Unit (The Innovation Governance Research Division) of the Institute for Future Initiatives. This proposal is based on the policy proposal "Industry-University Collaboration Policies Focusing on the University-Centered Venture Ecosystem" released in March 2020 by the Institute for Future Initiatives of the University of Tokyo, and is positioned as a proposal based on the results of subsequent research projects.

Specifically, the report recommends that (1) the government, local governments, universities, and startup support organizations promote various measures to strengthen the three global requirements for startups (diversity, serial entrepreneurship, and overseas mentoring), and (2) startup ecosystem support organizations should open up and attempt to connect with multiple ecosystems.

To address the latter, it is necessary not only to support startups from their own region or entity, but also to support startups from outside their region or entity, and to accept a wide range of support companies from outside their region or entity, and it is especially important for Japanese support entities to support overseas startups and attract overseas support entities. This is intended to connect multiple ecosystems, both domestic and international, to increase the scale of the ecosystem and thereby increase the benefits for startups operating there.

Finally, as a specific project to contribute to these recommendations, we proposed a global pitch competition in collaboration with overseas VCs and others.

Introduction

This policy proposal summarizes measures to promote the internationalization and globalization of the startup ecosystem in Japan, based on the results of research conducted by the University Industry and University Society Partnership Research Unit (The Innovation Governance Research Division) of the Institute for Future Initiatives. This proposal is based on the policy proposal "Industry-University Collaboration Policies Focusing on the University-Centered Venture Ecosystem" released in March 2020 by the Institute for Future Initiatives of the University of Tokyo, and is positioned as a proposal based on the results of subsequent research projects.

The 2020 proposal advocates the concept of "creating a startup ecosystem with universities at its core" and calls for a shift from the existing policy of industry-academia collaboration, which has been divided into two categories: measures to promote joint research with companies and measures to promote the creation of university-launched ventures, to an ecosystem-oriented policy that includes existing companies, startups, and financial institutions such as VC firms. From this perspective, the report proposes eight specific actions. The first of these recommendations is to "encourage the creation of venture funds that invest in 'spin-off' and 'carve-out' ventures in which universities and large companies collaborate. Even without the involvement of universities, carve-outs from companies have been very slow in Japan, but in September 2022, a spin-off venture capital fund was established and began operating to encourage spin-offs and carve-outs. The University of Tokyo IPC Open Innovation Promotion No. 1 " Investment Limited Partnership (abbreviated name: AOI1 Fund)", which is managed by the University of Tokyo IPC, will close in 2022 with a total of 25.6 billion yen, and since then, investments have been made in many spin-offs and JV projects with universities, as shown by certain progress. The "Fund" will close in 2022 with a total of 25.6 billion yen.

Furthermore, with regard to the second item listed, "Establish a JV system between universities and companies by improving the operation of the Technology Research Partnership Law and raising awareness of the system," although this is only one example, Hemilion, a JV between the University of Tokyo and SoftBank, was established in 2023.

Furthermore, the "Guidelines for Strengthening Collaborative Research through University-Industry-Government Collaboration" points out that "ecosystem-type measures should be encouraged. ("Guidelines for University IP Governance Guidelines (University IP GGL)" (issued on March 29, 2023), which was subsequently established

by the Japanese government, includes the following provision: "The current guidelines only refer to one-to-one management between universities and organizations, which needs to be improved. The discussion on how intellectual property contracts for joint research between universities and companies should be made from the perspective of developing the startup ecosystem is included in and reflected in the guidelines.

On the other hand, this proposal was based on observations of industry-academia collaboration in Japan and did not include any suggestions with reference to overseas ecosystems, which was an issue. In response to this problem, the Future Vision Research Center subsequently conducted two research projects: the "Startup Ecosystem Research Project" (donated by Sumitomo Life Insurance and others,¹) and "Clarifying Relational Assets in AI Startups" (Mitsui Fudosan UTokyo Lab²).

This proposal is based on the research results of these two projects, based on overseas trends and other information, and makes concrete recommendations for measures to promote the formation of a global startup ecosystem.

2. Challenges in the startup ecosystem

The startup ecosystem, which is the subject of this proposal, is widely used in academic circles as the concept of entrepreneurial ecosystem. This concept has been widely propagated since its gradual emergence in the late 2000s and early 2010s. Kanema (2022) discusses several issues that he considers important, based on nearly 100 existing studies. One of the last is the importance of ensuring diversity³. Since "strong path dependency in one region can sometimes be a driving force that excludes heterogeneous others", entrepreneurs who operate across national and regional borders can become key actors that serve as a link to their own country of origin or to other national and regional ecosystems, thus preventing dependency lock-in. In other words, it will be important for the regional startup ecosystem to maintain a high level of openness and tolerance.

In this regard, the participation of foreigners in the Japanese startup ecosystem has been seen as a challenge. For example, in the United States and Silicon Valley, startups are founded by foreigners and immigrants. In Silicon Valley, the percentage of foreign-born people in the total population has reached 39%, much higher than the national average

¹ <https://ifi.u-tokyo.ac.jp/projects/startup-ecosystem/>

² <https://mfut-lab.ducr.u-tokyo.ac.jp/theme/>

³ Daisuke Kanema, "Current Trends and Future Research Agenda of Startup Ecosystem Research: Toward Building Ecosystems Based on Regional Characteristics," Future Vision Research Center, Working Paper No. 12, (2022) in Japanese <https://ifi.u-tokyo.ac.jp/wp/wp-content/uploads/2022/07/WP012.pdf>

of 14%, and more than half of the unicorn companies from the U.S. have an immigrant founder, a significant difference compared to the percentage in Japan⁴.

This relates to the argument that Japanese startups are not expanding globally. It is said, "There is a strong fear that Japanese startups will have limited room for growth if they focus mainly on the domestic market, in part due to the declining and aging population. To become mega startups, they need to compete globally early on."⁵ Regarding the internationalization of startups' businesses, according to Ito et al. it is clear that the implementation of partnerships with foreign companies in the research field is related to exit strategies and capitalization. However, first of all, "although there are differences in degree depending on the field, the number of domestic university-started firms that want to form alliances with foreign firms is several times larger than the number of firms that have implemented alliances"⁶. The reasons for not realizing alliances with foreign firms are said to be not only strategic, but also lack of the necessary knowledge, experience and human networks, which again goes back to the issue of diversity. In light of these studies, the question arises as to whether the diversity problem needs to be solved as a factor that prevents the realization of go-global and bone global.

On the other hand, the issue of the importance of regional channel dependency, especially in the digital space, such as AI-related startups, should not be overlooked. Indeed, during the Covid19 pandemic, there was investment from the US in startups in India and other countries, suggesting that face-to-face relationships in the region are becoming less important in the digital society, especially with the development of online communication. The development of online communication⁷ in particular raises the question of whether physical proximity is also becoming less important in the startup ecosystem. In this regard, the results of a questionnaire survey conducted by Ito et al⁸. at our unit during the pandemic are suggestive. In other words, the results suggest that the experience of

⁴ <https://www.jetro.go.jp/biz/areareports/2021/b639a22436604cdc.html> JETRO

Report

⁵ 2023/05/29 Policy Feature Making Japan a Startup Nation vol.4 Japan with few unicorns. Recommendations for Startups to Expand Overseas METI Journal ONLINE in Japanese, <https://journal.meti.go.jp/p/27097/>

⁶ NISTEP DISCUSSION PAPER No.219 Data Analysis of University Ventures from an Internationalization Perspective(in Japanese) March 2023 <https://nistep.repo.nii.ac.jp/records/6837>

⁷ <https://www.mri.co.jp/knowledge/mreview/202010.html>

⁸ Ito, Nishikata, and Watanabe, "The Relationship between Subjective Performance of Remote Work and the Experience of Realistic Interaction with Supervisors and Colleagues," Future Vision Research Center Working Paper No. 25 (2023), in Japanese, <https://ifi.u-tokyo.ac.jp/news/16370/>

face-to-face interaction provides employees who are assigned to work remotely with the knowledge, mental stability, and satisfaction necessary for their work, and is a factor in improving their own work performance and engaging in activities that contribute to the organization. This result implies the importance of face-to-face relationship building, especially in startup team building. However, the development of online communication technology also means that once face-to-face relationships have been established, team functioning can be maintained at a distance.

Based on this, in an ecosystem based on the establishment of relationships in the region, two research projects, "Startup Ecosystem Research Project" (donated research project by Sumitomo Life Insurance⁹) and "Clarification of Relational Assets in AI Startups" (Mitsui Fudosan UTokyo Lab¹⁰) The following is a description of the findings of each of these projects. The following is a description of the implications of each project.

3. Start-up ecosystem research project

In 2021, the "Startup Ecosystem Research Project" was launched as a donated research project. As part of the collaboration agreement between the University of Tokyo and JETRO, this project was conducted in cooperation with JETRO and JETRO San Francisco, focusing on case studies of startups in Japan and the U.S. to identify the requirements for a global startup. In addition to the results obtained here, we have exchanged views with experienced people, especially from overseas accelerators and VCs, through seminars and symposiums as follows.

- November 4, 2021 Symposium "How to compete in the world as seen in a university-launched bone global company"
- October 06, 2021 Seminar "How University Startups are Built in the U.S."
- December 13, 2022 Seminar: "What are the three elements necessary for a startup to win in the world?"
- March 16, 2023 Symposium "How to Build a Global Startup Ecosystem in Japan?"

The following is a list of key guest participants who participated in the exchange of ideas on this occasion.

- Mr. George Panagiotakopoulos, Director, Global Innovation and Partnership, Berkley Skydeck

⁹ <https://ifi.u-tokyo.ac.jp/projects/startup-ecosystem/>

¹⁰ <https://mfut-lab.ducr.u-tokyo.ac.jp/theme/>

- Dr. Tony Raven, Former CEO, Cambridge Enterprise
- Mr. Tom Moss, CEO, Skydio GK
- Caroline Winnett, CEO, Berkeley SkyDeck
- Will Robinson, Senior Vice President, Techstars

Consistent with the results of the empirical analysis, these discussions revealed that the three key requirements to become a bone global startup are (1) diversity, (2) serial entrepreneurship, and (3) overseas mentorship. The results were presented (video release) in Cambridge, Boston on May 2, 2023¹¹.

Specific actions that could be taken to meet these three requirements include the following

Promoting diversity.

If it is important for startup management teams themselves to be diverse, and for management teams to be connected to more diverse external networks, what specific actions could be taken? Although many organizations are working to promote gender-related measures, the percentage of women in startup management is low, and the percentage of female presidents in newly listed companies is estimated to be around 2%. To address this issue, the government has established a support package for female entrepreneurs starting in 2023¹². In addition to these measures, entrepreneurship education for women at universities should be implemented in the context of university start-ups. The government is also working to support foreign entrepreneurs¹³. While these measures are the foundation for diversity, the point here is to increase the diversity of management teams, and the key point is to support the formation of teams that include women and foreigners. In this context, the role of foreign students in university-based start-ups should be highlighted. In many cases, when foreign students are actually included in the management team of a university-launched startup, they are planning to do business overseas from the beginning. To increase such opportunities, it is important to create an environment that supports foreign students' entrepreneurship, and to promote activities such as promoting internships in domestic and overseas startups in cooperation with the government and domestic and overseas enterprises.

¹¹ <https://drive.google.com/file/d/1JWpaQM3lbF3VHgHsbCihFjiZ8H2ErfT/view?usp=sharing>

¹² <https://www.kantei.go.jp/jp/content/siryos-1.pdf>

¹³ Project to Promote Entrepreneurial Activities by Foreign Nationals
<https://www.meti.go.jp/policy/newbusiness/startupvisa/index.html>

In addition to these, other services such as management recruitment for start-ups have recently been seen, and such diversity-oriented recruitment will also be required.

In addition, diversity team-building programs are needed at universities in the entrepreneurship education and business support phases. When international students are included in teams, English-language programs should be the cornerstone of entrepreneurship education and support services. Such efforts should be undertaken by entrepreneurship education courses and accelerators at universities and other institutions.

Serial Entrepreneurship

The startups founded by serial entrepreneurs and their connection to the management team contribute greatly to the growth potential of startups in the global market. On the other hand, there are still few serial entrepreneurs in Japan and such opportunities are limited. Therefore, there is a need for a mechanism to effectively connect the few serial entrepreneurs with startups. In this regard, it would be effective for accelerators to run Entrepreneur in Residence (EIR) programs, in which serial entrepreneurs are placed in startups while receiving a salary for a certain period of time to prepare for entrepreneurship.

Overseas mentorship

JETRO and other support programs already provide startup teams with mentorship from overseas accelerators and other organizations. Expanding such opportunities and attracting overseas accelerators and VCs will also increase opportunities to connect with overseas mentors.

It should not be overlooked that a company with a management team that meets these three requirements will naturally address important and impactful issues from a global perspective, which means that it will target not only a specific region but also a market that spans many countries. Currently, the Japanese government has set the creation of unicorns as a policy goal¹⁴, as well as the creation of many startups. It is particularly important for startups to have the three requirements mentioned here in order to receive overseas funding and become unicorns.

In promoting measures to foster such startups, it would be effective to hold startup pitches in Japan in English, with overseas VCs and others serving as judges. Such an

¹⁴ The five-year plan on strengthening startup development sets a goal of increasing the number of unicorns (unlisted companies with an enterprise value of \$1 billion or more) from only six in Japan to 100 in the future.

https://www.cas.go.jp/jp/seisaku/atarashii_sihonsyugi/pdf/ap2023.pdf

opportunity would provide mentoring opportunities from overseas VC firms, etc., as well as a chance to make contacts with serial entrepreneurs. As described below, as a result of the Startup Ecosystem Research Project, we are currently proposing a Startup Challenge to promote a healthy startup ecosystem in collaboration with JETRO, the Tokyo Metropolitan Government etc. The concept video¹⁵ was created and presented at the UIDP Tokyo Forum on October 10, 2023, and we believe that promoting this type of initiative will help promote the three requirements.

4. Research on entrepreneurial ecosystems in the AI industry

AI is being introduced into all industries with the recent introduction of new technologies such as Large Language Models (LLMs), and is considered an important technology that will impact industrial competitiveness. AI talent is active in many countries, particularly in the Toronto, Canada region, which is home to pioneers in AI research, such as Professor Jeffrey Hinton of the University of Toronto, as well as a concentration of AI startups and support services. The Toronto area is also home to a number of AI startups and the services that support them. We conducted a survey in Toronto and the nearby Waterloo region (Waterloo, Toronto: hereafter referred to as WT), which has also produced a number of AI startups. By comparing the results with the AI ecosystem in Hongo, Tokyo, a leading region in the AI field in Japan, we sought to identify issues¹⁶.

It turned out that the large number of startups were supported by accelerators and other organizations of both Toronto and Waterloo(WT) , two regions 130 km apart, indicates that the startup ecosystems in the two regions are integrated. Specifically WT has a dense network between many support organizations and startups across regions, while Hongo, Tokyo has a large presence of support organizations related to the University of Tokyo, and support organizations are less concentrated than in WT. In general, the network between startups and support organizations is found to be localized and fragmented.

¹⁵ <https://drive.google.com/file/d/1jrD8MP2hgQxJHcKNIVPAaayC2BV5Ao8t/view?usp=sharing>

¹⁶ Michichi Fukushima and Toshiya Watanabe, "Entrepreneurial Ecosystems in the AI Industry: A Comparison of Waterloo Toronto (WT) and Hongo," Center for Future Vision Research, Working Paper No. 16 (2023), <https://ifi.u-tokyo.ac.jp/wp/wp-content/uploads/2023/07/WP025.pdf>

Although both regions are located 130 km away from WT, each of these support organizations is characterized by the fact that their support is not limited to local startups, but also extends to support organizations in other regions. Moreover, the support is not limited to both regions, and some of the startups supported by the Toronto accelerator we interviewed were based in India¹⁷. This may have been triggered by some kind of personal relationship between the large number of immigrant in Toronto who became eligible for support. By openly targeting such support, connections with overseas ecosystems are naturally occurring. Given the diversity of Canadian startup management teams and the fact that the Canadian market is not that large, the topics they are working on are naturally focused on the global market. In this context, there are cases such as Treepz, a WT-supported startup that has become a unicorn in Africa¹⁸.

Such openness to funding targets can also lead to competition for funding targets, increasing the competitive environment for funders in the region. For example, the University of Toronto's Creative Destruction Lab (CDL) accelerator was successful in attracting U.S. VCs by leveraging its founders' network in Silicon Valley¹⁹, but the final selection rate for the program was extremely low and the program was extremely competitive for the startups that applied. The program was extremely competitive for startups, and at the same time, competition among VCs was encouraged in the sense that not only local VCs but also U.S. VCs became the main backers. As a result, competition was fostered on both the supply and demand sides of the overall support services, and the quality of the resulting startups increased. Openness thus promotes competition. Because of this pro-competitive aspect of openness, it is often not welcomed by service providers in the ecosystem. For WT, however, such pro-competitive measures are considered successful in the sense that they increase opportunities for startups and promote differentiation on the support services side.

Based on these observations, it seems that opening up the support targets and support entities in the startup ecosystem would be effective in expanding and consolidating the ecosystem.

¹⁷ <https://xlscout.ai/> etc.

¹⁸ <https://ng.treepz.com/> etc. . Many other African startups have been incubated in Toronto <https://techpoint.africa/2022/12/15/techstars-toronto-winter-2022/>

¹⁹ CDL "Canadian VCs who were not interested in Canadian startups at first realized their potential through CDL's activities and started , and gradually started to participate. Today, there are 20 startups and 30 to 40 support organizations from Japan and abroad.

5. Recommendations and project proposals as concrete measures

The implications of these two projects can be summarized in the following two points.

① Strengthen measures to promote bone global3 requirements for startups

The government, local governments and universities, and startup support providers will promote various measures to enhance the bone global3 requirements for startups (diversity, serial entrepreneurship, overseas mentoring) as indicated in this paper.

② Openness of Startup Ecosystem Supporting Entities and Connecting Multiple Ecosystems

In addition to supporting startups from their own region or organization, etc., they will also support startups from outside their region or organization, and accept a wide range of support entities from outside their region or organization. In particular, it is important for domestic support organizations to support startups from abroad and to attract support organizations from abroad. This will connect multiple ecosystems, both domestic and international, and increase the scale of the ecosystem, thereby increasing the benefits for startups operating there.

To specifically promote the above, policies are needed to encourage startups to meet the three requirements and to promote the openness and globalization of the ecosystem. In an attempt to provide guidance for these measures, we held several pitch sessions for startups in the workshops and symposiums held during the course of this project.

For example, at the symposium on "How to nurture Born Global Startups spin-off by University" held in November 2021. At the symposium, startups from the Japan pitched their startups to the U.S. side, and the U.S. startups were critiqued by VCs from the Japanese side. This provided startups on both sides with input from a global perspective, promoted the globalization of business plans, and was a measure of openness that could lead to the provision of overseas mentoring opportunities. In January 2023, a startup pitch session and symposium on "Developing and Cooperating in the AI Startup Ecosystem" was also held between Hongo/Tokyo and Waterloo/Toronto, where startups from Canada and Japan were critiqued by VCs and accelerators from both countries. One of the Canadian startups subsequently received support to expand to Japan, and the event served as a bridge between the two ecosystems.

Although these events were small in scale, it would be a concrete action to hold a large-scale international startup pitch event with features consistent with the two recommendations above. The features that the event should have are

The program should encourage participants to address global challenges, such as global environmental issues, from a global perspective.

② Must be an English-language pitch competition

Must be a pitch competition in cooperation with overseas VCs, etc.

④ The event must be attended by a large number of startups from Japan and abroad.

⑤ It should encourage the participation of teams rich in organizational and attribute diversity.

⑥ Mentoring must be provided from a global perspective.

⑦ It must be a provider of overseas mentoring opportunities.

While there have been many pitch competitions in Japan, few international pitch competitions have been held in English, and it is fair to say that there has never been an event with the above conditions.

In the Startup Ecosystem Research Project, we designed a specific startup pitch that meets these conditions in order to implement the research findings. Specifically, we selected a theme from the 11 categories of the OECD, with the theme of "well-being" as a common goal of humanity as a global issue, and planned a startup pitch in cooperation with overseas VCs and others. The startup pitches were planned in cooperation with overseas VCs and others.

The purpose of the event was to encourage the participation of a wide range of stakeholders from a global perspective, with a view to the 11 categories of the "Well-Being Framework" proposed by the OECD, with the aim of accumulating Natural Capital, Human Capital and Social Capital as the foundation of a Well-Being Economy. The goal is to accumulate Natural Capital, Human Capital and Social Capital as the foundation of the Wellbeing Economy. By supporting start-ups and projects of companies and research institutions that contribute to the accumulation of these capitals, we aim to realize multifaceted wellbeing by realizing not only human physical and mental health, but also a society in which diverse people coexist and connect with each other, and a sustainable global environment that serves as the foundation of such a society. This is the ultimate goal of the project. As the ultimate goal, we share these ideas, and with the realization of this goal as our mission (Mission Driven), we will work toward the goal of becoming an entrepreneur who aims to solve social problems by maximizing the use of advanced knowledge and connecting it to social implementation (Deep Tech Driven) based on a human-centered, consumer-centered approach (Citizen Driven). The company

aims to create an ecosystem for entrepreneurs who aim to solve social problems by maximizing the use of advanced knowledge and connecting it to social implementation (Deep Tech Driven).

The following three specific challenge tracks are envisioned

Track 1 Global Liveability

The foundations of human survival are threatened by severe global warming and the rapid decline of biodiversity. In addition to energy issues, agriculture and food are components of these problems. We encourage business proposals that use deep technology to solve these critical issues and build a human-friendly environment, as well as business proposals that use digital technology to promote these issues.

Track 2 Healthy life

The foundation of human well-being is good health throughout life. Recent remarkable advances in life sciences have led to the development of deep-tech technologies that treat aging and enable healthy longevity. We recommend proposing health projects that contribute not only to "physical health", but also to "mental health" and "social health", using a combination of these life science technologies and digital technologies, among others.

Track 3 Living & City

People shape their lives and live their entire lives in cities and communities, where they are educated, raise families, meet and work with a variety of people. Smart cities are needed for the well-being of the people who live there. Proposals that contribute to the quality of life and the realization of an inclusive society are encouraged, as well as projects that utilize digital technologies to ensure safety and security, and elemental technologies that complement these technologies.

It is hoped that through such internationally open events, domestic startup supporters will contribute to the direction of this proposal.

6. Remaining issues

Based on the results of the research project on start-ups, we deduced the direction of the ideal policy and proposed specific projects to promote this policy. Currently, the Japanese economy is expected to emerge from a long period of deflation, and foreign institutional investors are often heard saying that this is an opportunity to invest in Japan. To take advantage of this timing and attract inbound investment in domestic startups, it is important to connect with startup ecosystems overseas. To this end, it is essential for support organizations on the Japanese side to open up their support targets,

and for support organizations to open up their support activities. It is desirable to promote cooperation with companies and organizations of great diversity within this ecosystem.

On the other hand, it should be noted that there are also greater risks than in domestic collaboration due to overseas compliance issues, adaptation to different cultures, and recent geopolitical changes. In other words, governance of the entire ecosystem will be important. How to disseminate governance norms across the ecosystem could be included in ESG guidelines for VC and other investments, but this is currently insufficient and seen as a challenge.

In this sense, this proposal would like to emphasize that it is important in startup policy to take the perspective of designing the entire startup ecosystem, rather than a collection of individual startup support measures. The policies should be based on the perspective of where and how to work to make the ecosystem desirable, such as expanding the ecosystem, connecting it to other ecosystems, and improving the governance of the ecosystem, while there is a circulation of funds, human resources, and knowledge within the ecosystem. It is essential to have a perspective on where and how to work to create a desirable ecosystem. From this perspective, it is important to consider and implement methods for designing ecosystems.