Startup Ecosystem: Strategic Opportunities

아산나눔재단
THE ASAN NANUM FOUNDATION

Top 10 Issues and Development Plans for Korean Startup Ecosystem through Comparative Analysis of 6 Overseas Countries

Jung Wha Han

Chairman, Asan Nanum Foundation

Introduction: "Startup Ecosystem" in Our Research

Process of Our Startup Ecosystems Research

Analytical framework for the startup ecosystem (9 categories)

Identify major problems of Korea's startup ecosystem

7 countries selected to compare startup ecosystems
: Korea, USA, China, Japan, UK, Germany, France

PART 1 – Comparison of quantitative performance of **major overseas startup ecosystems**

PART 2 – Research on the changes and development of e-ship/startup policies by countries

PART 3 – Analysis of the **core issues from major overseas startup ecosystems**

Identify features of overseas startup ecosystems and benchmarking implications

Suggest directions for the development of the future startup ecosystem in Korea

Introduction: "Startup Ecosystem" in Our Research

Factors of Startup Ecosystem – Analytic Framework

1. Entrepreneur/Startup

- Entrepreneurship/intentions
- Popularity of startup activities
- Quality of entrepreneurial activities

2. Company/Performance

- Company survival rate
- Job creation and contribution
- Scaleup (High-growth Companies)

3. Finance

- Venture capital investment
- Angel investment /Alternative Finance
- EXIT(IPO-M&A Ratio)

4. Support Organization/Infra

- Levels of the supporting organizations
- Commercialization/Physical infrastructure

5. Technology/Knowledge

- Technology development skills
- Technology skills for the 4IR
- Level of technology transfer/ commercialization

6. Education/Human Resources

- Accessibility to education
- Skill proficiency of labor force
- Flexibility of the labor market

7. Culture/Awareness

- Fear of failure
- Serial entrepreneurs
- Second-chance/Social safety
- Social and cultural norms

8. Policies/Regulations

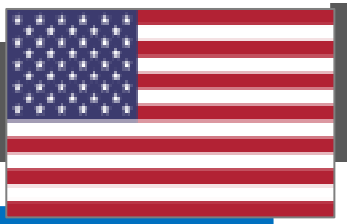
- Public policies for startups
- Investment ratio between the public and the private
- Regulations regarding startups

9. Globalization

- Entry into the foreign market
- Trade and financial globalization
- Foreigner-friendly business environment(Visa etc.)

II Overview of Startup Ecosystem in Korea and 6 Overseas Countries

Features of the Startup Ecosystem in the USA



Ecosystem Features

1 Excellent accessibility to entrepreneurial infrastructure

- Excellent support links among the federal and state governments, regional support institutions, and universities

2 Establishment of an regional startup hub

- Numerous global and characterized startup hubs including New York, Boston, Los Angeles, and Seattle

3 Various private-led venture capitals on growth stages

- Dfferentiation of later investment such as VC/PE, and early investment such as Angel/AC/CF in private capital market

4 Startup policies that encourage innovation

- SBIR/STTR serve not only as support for companies but also to meet the innovation demands of the whole country

Political Features

☑ **(Obama Administration) Startup led innovative economy**

- Active support for startups and spread of entrepreneurship to overcome the economic crisis
- A Strategy for American Innovation(Startup America Initiative(2011), Scaleup America Initiative(2014))
- JOBS(Jump Start Our Business Startup Act)

☑ **(Trump Administration) Corporate-friendly regulations**

- Vitalization of economy by alleviating regulations
- Made in USA, Buy American, creating jobs for the American people, control of exports and investment
- Critical attitude towards Silicon Valley companies

☑ **Organic link between startup policies and ecosystem**

- (Federal) Clear description of goals-strategies-policies, development of e-ship and culture across the country
- (State) Focus on regional infrastructure, characteristics, and strengths, crucial roles of universities in regional ecosystem
- (Community) Convergence among institutions that follow through with the SBA/SBDC of the federal and state government and the community startup support institutions

II Overview of Startup Ecosystem in Korea and 6 Overseas Countries

Features of the Startup Ecosystem in China

Ecosystem Features

1 Link naitonal innovation strategies with startup policies

- Made in China 2025, Smart+, AI development plans, New Infrastructure Construction(新基建), etc.

2 Establishment wide startup specialization areas

- Greater Bay Area(粤港澳大灣區): Industry convergence(i.e. AI) of major cities and international openness of cluster

3 Contribution of leading big-tech companies to EE

- Business acceleration and investment for startups by large big-tech companies such as BATJ

4 University: Nurturing innovative startup leaders

- Nurture excellent entrepreneurial talents from prestigious universities such as Peking and Tsinghua University

Political Features

☑ **(2012~2019) Exploring e-ship/Opportunistic startups**

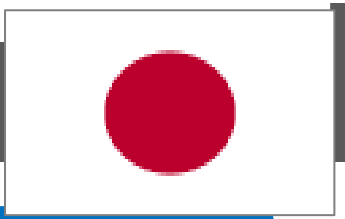
- Official rise of opportunistic startups moving beyond imitating other companies: Alibaba – Amazon, Tencent – Facebook, Baidu – Google
- Shuang Chuang(双创): Establishment of a startup space for the public
- Made in China 2025: Realizing the vision as a manufacturing power with automation of traditional industries
- Smart+: Development of future technology such as ABC(AI, Big data, Cloud) and apply ICT to incorporate automation in the community(follow-up of Made in China 2025)

☑ **(2020~) Innovative e-ship/Innovative startups**

- Rise of "innovative entrepreneurs" who create their own startups based on their own innovative ideas
- Win-win economic benefits with New Infrastructure Construction(policies to advance data economics)
- Efforts to improve the competitiveness of the domestic capital market to nurture high-tech startups(STAR Market, a Chinese equivalent to NASDAQ

II Overview of Startup Ecosystem in Korea and 6 Overseas Countries

Features of the Startup Ecosystem in Japan



Ecosystem Features

1 4th venture boom after the global economic crisis

- Increasing trend on the number of startups, amount of VC investment and Exit(IPO) performance since 2010

2 Prime Minister-led policies across all departments

- Startup policies are at the core of the Abenomics growth strategies to fundamentally change the ecosystem

3 Industry-academic cooperation led by universities

- New industry-academic cooperative organization, entrepreneur education, and active human exchanges

4 Stronger link between large companies and startups

- Development into an open innovation community with alliances between large companies(CVCs) and startups

Political Features

☑ **Features of Abenomics startup policies**

- Step 1(Startups that are close and simple): Entrepreneur education and fostering talents, spread entrepreneurship
- Step 2(Deliver funds and know-hows related to startups): Technicians, IT, local businesses, life science, life-long active jobs from startups, overall distribution of risk money
- Step 3(More opportunities for growth): Links to foreign countries, existing companies, and the government

☑ **Venture Challenge 2020(April 2016)**

- Enforce growth strategies with the Ministry of Economy, Trade and Industry
- Goals

  1) Establish a platform that serves as a bridge between regions and the world

  2) Establish a citizen-led, autonomous innovation and ecosystem

  3) Double the GDP to VC investment

II Overview of Startup Ecosystem in Korea and 6 Overseas Countries

Features of the Startup Ecosystem in the UK

Ecosystem Features

1 Development of SE focusing on innovative techs

- Europe's best hub for tech startups, with many technology companies and related talents

2 Programs focusing on scaleup and growth stage

- Tech Nation: Government startup policies brand
- Scaleup Institute: Non-profit organization dedicated to scaleup

3 High level of openness, diversity, and autonomy

- Entrepreneur visa programs for attracting foreign talents
- Position as a global finance hub – Inflow of foreign capitals

4 Local startup hub with private-public cooperation

- Balance of government policies and private-led programs, a network and feedback system centered on the ecosystem

Political Features

☑ **(2010~2012) Support for Startups**

- Tech City: Tech startup support policies for the startup ecosystem of Northeastern London
- Startup Britain Initiative: Supporting university spin-offs
- Seed Enterprise Investment Scheme

☑ **(2013~2016) Support for Scaleups**

- "Small Business: GREAT Ambition" for the scaleup of small companies
- Establishment of the British Business Bank (BBB)
- Establishment of the "Scaleup Institute" to solely focus on scaleups

☑ **(2017~) Activation of the startup ecosystem led by the private sector and companies**

- TechNation by combining Techcity UK and TechNorth
- Develop an open ecosystem with funds, human capital, and technology/expertise
- Excellent connection between the inbound and outbound of entrepreneurial activities

II Overview of Startup Ecosystem in Korea and 6 Overseas Countries

Features of the Startup Ecosystem in Germany

Ecosystem Features

1 Long-term stagnation of entrepreneurial activities

- Entrepreneurial activities on a continuous decline since 2004
- Results of a stable labor market and fear of startup failures

2 Systematic support program for high-tech startups

- Startup support programs from professional institutions
- EXIST(Pre-seed) – HTGF(Seed) – Coparion(VC)(Growth)

3 Stable social safety net to tackle startup failures

- Systematic support for survival of entrepreneurs – subsidies
- "Offensive Startup Strategies" – culture of "Second chance"

4 Rise of Berlin as an startup hub

- Advantages as a hub for many people with cheap rent and position as an international city with synergistic effects from the state government and private companies

Political Features

☑ **High-tech Strategy(Deutscher Bundestag, 2006~)**

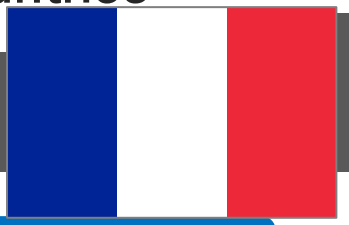
- Formation of high-tech strategies every 4 years since the start of the Merkel administration in 2006
- Investment in not only technology, but also to link research and manufacturing, with strategies that are implemented across the entire society such as establishing edu systems
- Startup strategies from the High-tech Strategy 2025
  1) Establish open innovation and a startup culture
  2) Realize knowledge to be transferred to applicable fields
  3) Reinforce the federal government to promote innovation
  4) Reinforce entrepreneurship

☑ **Education and technology commercialization in universities and research institutions**

- EXIST(1998~): Creating an entrepreneurship culture, startup subsidies, and technology transfer(5^{th} phase since 2018)
- Researcher Spin-off startup support from the Fraunhofer
- Support technology commercialization based on the expert network of the Steinbeis University

Ⅱ Overview of Startup Ecosystem in Korea and 6 Overseas Countries

Features of the Startup Ecosystem in France



Ecosystem Features

1 National policies to become a "Startup nation"

- Establishment of a national brand "La French Tech" for startup support policies of the government

2 Public policies for more active deep-tech startups

- Focused growth of deep-tech commercialization and SE based on high levels of basic technology capabilities

3 Establishment of a startup support governance

- French Tech responsible for the administrative aspect
- BPI France responsible for the financial aspect

4 Openness and networking to develop a global SE

- Development of a base network for the globalization of the startup ecosystem – French Tech Community

Political Features

☑ (2009~2016) Integration Period

- Hollande administration's policies that aimed at spurring "innovation" led by the Ministry for the Economy and Finance
- Establishment of BPI France, La French Tech(governance)

☑ (2017~) Development Period into a Startup Nation

- Tax reform: Annual innovation-related tax deduction of approximately 5 billion euros
- Government support: 1.5 billion euros of support until 2022, support for AI-related research
- VC investment: 53% of that of the UK(2007) → 79%(2019)

☑ La French Tech

- A unique movement that brings together startups, investors, policymakers, and organization founders, led by the Presidential Secretariat and responsible by the Secretary of State for the Digital Sector
- Emphasis on a connected ecosystem with bases in major cities and regions in France, and global startup hub networks in major cities over the globe

III

Top 10 Issues of the Korea's SE and Implications from Foreign Examples

Top 10 Issues of Korea's Startup Ecosystem

01 Low survival rate and scaleup of startups compared to the quantitative growth

02 Government-led investment ecosystem for startups

03 Absence of an EXIT ecosystem for leading startups

04 Lack of specialization strategies for regional startup ecosystems

05 Absence of strategies to encourage startups in new technology/industries

06 Low commercialization success rates for public technology

07 Lack of an education system for developing entrepreneurship and startup skills

08 Negative social awareness on startups and absence of a social safety net

09 Regulations and high entry barriers to entrepreneurial and business activities

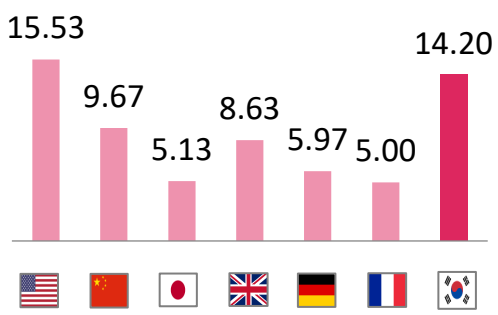
10 Low levels of globalization of startups and the startup ecosystem

Top 10 Issues of the Korea's SE and Implications from Foreign Examples

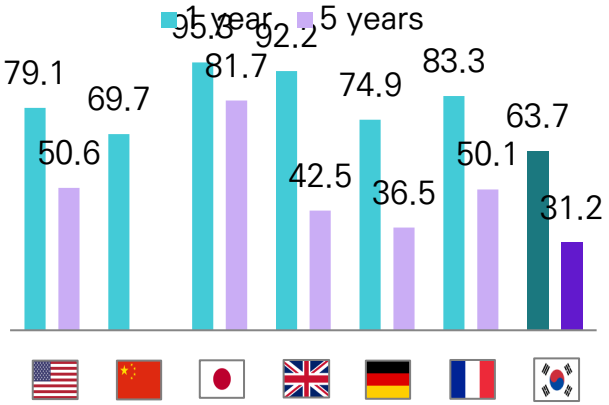
Issue 1: Low survival rate and scaleup of startups compared to the quantitative growth

Index

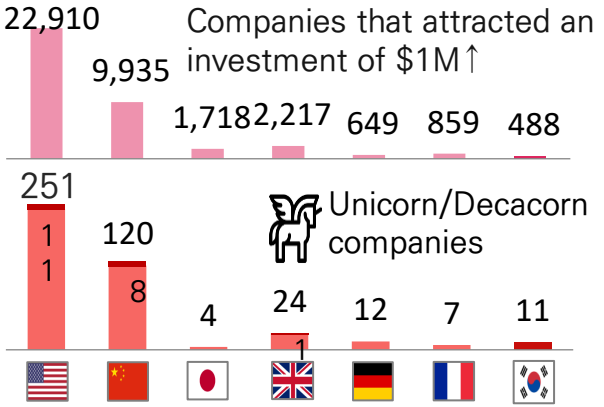
TEA rates of GEM



Survival Rates



Tech Scaleup/Unicorns



Analysis

☑ Lack of systematic growth(scaleup) support systems and programs for startups

- Lack of support systems that provide a guide to the resource needed by each growth stage
- Absence of national-level goals related to the scaleup of startups, or organizations solely focusing on scaleup

☑ Lack of efforts to develop public procurement markets to overcome the death valley of startups

- KOSBIR: Unclear goals to support technology innovation and lack of a well-organized monitoring system
- Absence of public procurement for various types of startups and SMEs, especially disadvantaged businesses

Top 10 Issues of the Korea's SE and Implications from Foreign Examples

Issue 1: Low survival rate and scaleup of startups compared to the quantitative growth

Example 01 Tech Nation & Scaleup Institute (UK)

TECH NATION

Early Stage

FOUNDERS' NETWORK
- Peer-to-peer network for tech startup founders

RISING STARS Ver 3.0
- Competition for Innovative, early-stage tech companies

LIBRA Ver 1.0
- Supporting underrepresented tech leaders(e.g. Black Founders)

Seed~Pre Series A, Sales ~ £1.5M

Mid Stage

UPSCALE Ver 7.0
- Coaching and mentoring from over 20 scale coaches
- Founder circles – designated groups of 8-10 Upscale founders
- Middle manager training – Fast tracking future leaders or upskilling managers

Series A, Sales £1.5M~£5M

Late Stage

FUTURE FIFTY Ver 10.0
- Recognition as UK's most successful digital biz.
- Peer-to-peer learning and networks
- Masterclass workshops led by global experts

Series B+, Sales £5M+, 50% annual growth

Features
- Provide peer-to-peer opportunities by developing a network and community of technology entrepreneurs by growth stages
- Effective scaleup mentoring and consultations with coaches and mentors specializing in scaleup

Top 10 Issues of the Korea's SE and Implications from Foreign Examples

Issue 1: Low survival rate and scaleup of startups compared to the quantitative growth

Example 01 Tech Nation & Scaleup Institute (UK)

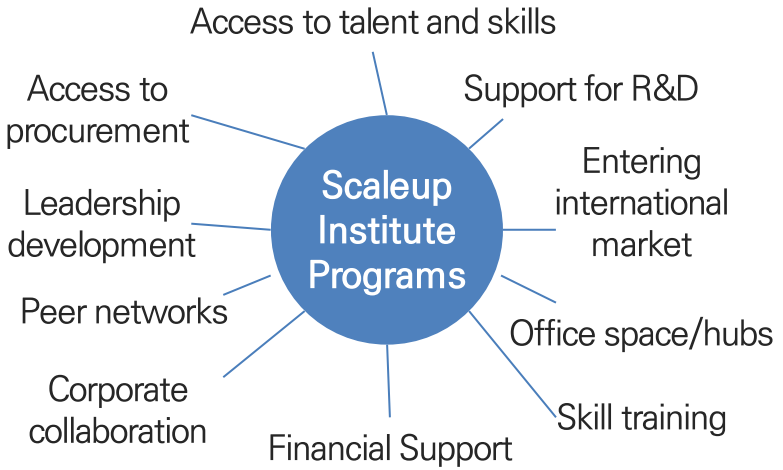
Scaleup Institute

☑ World's first organization solely for scaleup support

- Private non-profit organization established in 2014
- Set up clear philosophy and missions to develop an effective scaleup ecosystem(Create 150,000 jobs, increase of 225 billion£ of GDP by 2034)
- British government secured a budget of 250 million£ to establish a community of companies-experts-investors for a platform for investments

☑ Scaleup program and review of the scaleup ecosystem

- Publish Scaleup Index and Scaleup Review, scaleup surveys in the UK
- Portal provides information on scaleup programs(200+) in the UK



Implications

☑ Provide a systematic support program based on the demands of startups by growth stages

- Especially focus on establishing a network among experts, colleagues, and other entrepreneurs

☑ Set up clear missions for supporting scaleup and securing experts in and organizations for scaleup

- Set up mid-/long-term goals of scaleup policies, and develop a system of research-spread-support scaleup

Top 10 Issues of the Korea's SE and Implications from Foreign Examples

Issue 1: Low survival rate and scaleup of startups compared to the quantitative growth

Example 02 SBIR/STTR & Small Business Procurement (USA)

SBIR/STTR

Political goals and idea of SBIR/STTR

- Goals: 1) Meet federal research and development needs , 2) Stimulate technological innovation, 3) Increase private-sector commercialization of innovation derived from federal research and development funding
- Small Business Innovation Research(SBIR): *3.2%* of the extramural research budget for agencies with a budget greater than $100 M per year(~$3.2 billion minimum spend each year)
- Small Business Technology Transfer(STTR): *0.45%* of the extramural research budget for agencies with a budget greater than $1B per year(~$450 million minimum spend each year) (Requires a non-profit research institution partner)

Participating agencies(SBA, 2020)

SBIR/STTR three phase process(SBA,2020)

Features

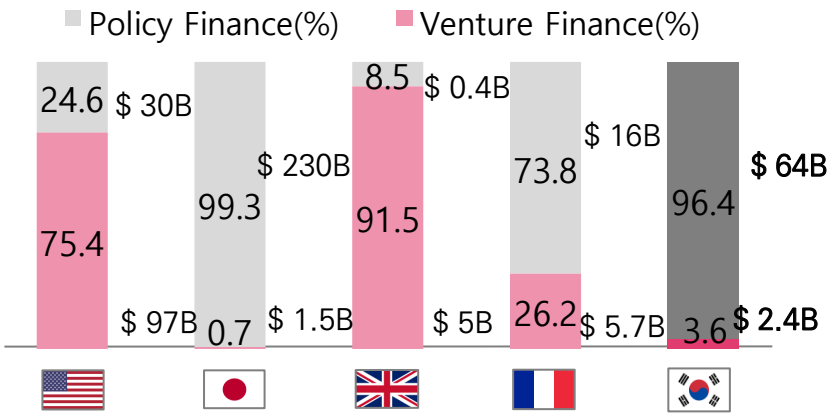
- Autonomous activities by departments with the overall guidelines of the SBA as a reference
- Demand-based policies related to core technology and innovation performances of each department
- Phase III based on public procurement

Top 10 Issues of the Korea's SE and Implications from Foreign Examples

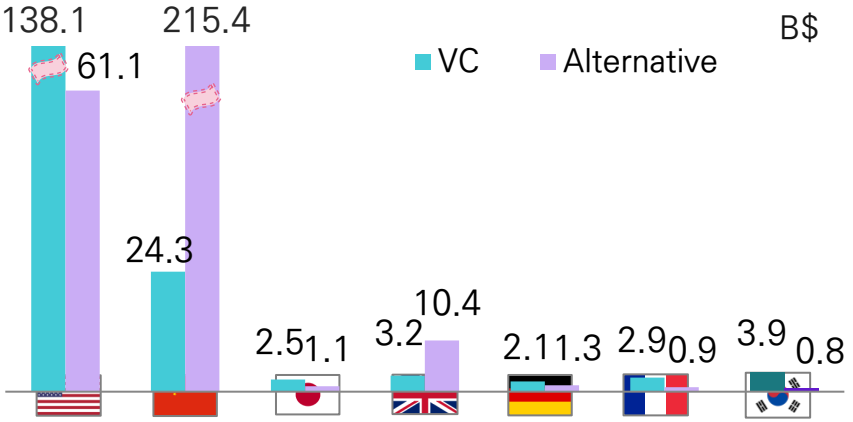
Issue 2: Government-led investment ecosystem for startups

Index

Funding from the Public/Private



Size of VC and Alternative Finance



Analysis

☑ Limitations of private VC investment ecosystem due to high dependency on the govt's fund of funds

- Matching with government FoF leads to lack of abilities and experience in risky investments of private VCs
- Lower percentage of later-stage investments in leading/high-growth startups due to small size of investment

☑ Despite the increase of angel investments, the alternative finance system(P2P/CF) is still unorganized

- Recent increase in the amount of angel investment for startups due to tax benefits
- The alternative finance ecosystem is still small in size due to financial regulatory barriers and unmature market

Top 10 Issues of the Korea's SE and Implications from Foreign Examples

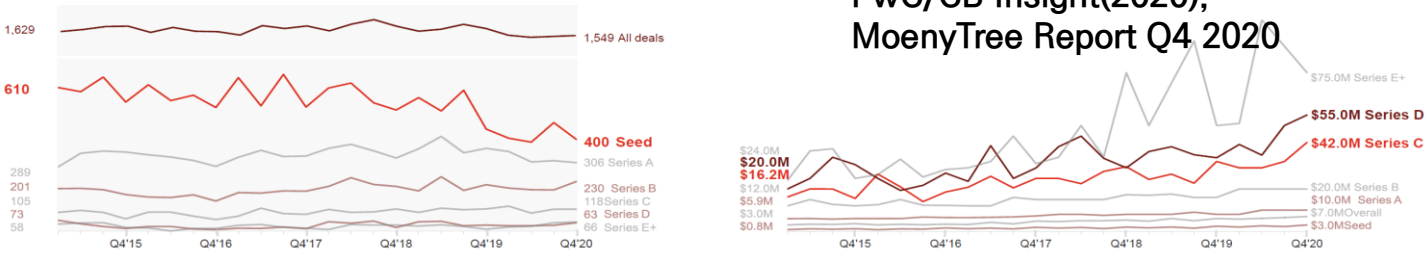
Issue 2: Government-led investment ecosystem for startups

Example 01 Establishment of a private investment ecosystem by growth stages (USA)

☑ Virtuous cycle of the startup investment ecosystem in the USA: Role of private investors by growth stages

- Clear differentiation of roles between the public-private by growth stages of startups and efficient communication: Government – Development of infrastructure, Angel and AC – Seed/Early stage investment, VC – Expansion/Later stage investment, etc.
- As VC investment focuses on the expansion/later stages (Series C/D), angel and AC investments became the major sources of funds for startups in their early stage(Many successful AC investments such as Y-Combinator, AngelPad, and StartX)
- Number of large mega investments of over $100 mil. per investment is on an annual increasing trend, reaching a record-high of 318 investments(49% of entire investments) in 2020

PwC/CB Insight(2020), MoenyTree Report Q4 2020



(Left) Number of VC investments by growth stage of startups / (Right) Amount per investment

☑ Comparison of the number of invested startups and subsequent investment rates by growth stages

Stage	Seed – Angel	Series A	Series B	Series C	Series D	Series E+	Exit	Unicorn
Korea	138	68 (49.3%)	48 (70.6%)	7 (14.5%)	2 (28.6%)	0 (0%)	8 (5.8%)	2 (1.4%)
USA	8,667	2,300 (26.5%)	958 (41.7%)	316 (33%)	81 (25.6%)	17 (21%)	1,064 (12.3%)	30 (0.3%)

Top 10 Issues of the Korea's SE and Implications from Foreign Examples

Issue 2: Government-led investment ecosystem for startups

Example 02 New group of early stage startup investment – Capital Entrepreneurs (Global)

The rise of new "Capital Entrepreneurs"(Kauffman Foundation, 2019)

- The rise of new Capital Entrepreneurs
- A new group of investors as an alternative to bank loans and venture capital investment
- An advanced, new system to reduce the number of obstacles for entrepreneurs' and business owners' access to funding

Development of infra to improve the accessibility to early stage capital investment

- Capital Infra: Various investment measures and financial intermediaries serve as the bridge between finance centers and the funds that entrepreneurs actually need
- People Infra: Capital Entrepreneurs that can provide funds for 83% of entrepreneurs who cannot take advantage of private capital
- Information Infra: Advanced data and tech can build the infra and standards to speed up capital flow for many entrepreneurs
- Knowledge Infra: Obtain information on better accessibility to funds and knowledge to understand capital restrictions on firms
- Policy Infra: Policymakers to reflect the ideas of business owners and Capital Entrepreneurs in capital market-related policies

Implications

introduces appropriate venture capital and encourages subsequent investment in all growth stages

- Increase the investment for later stages and improve the link between investment markets in growth stages

Development of a capital entrepreneur ecosystem to expand the early stage startup investment

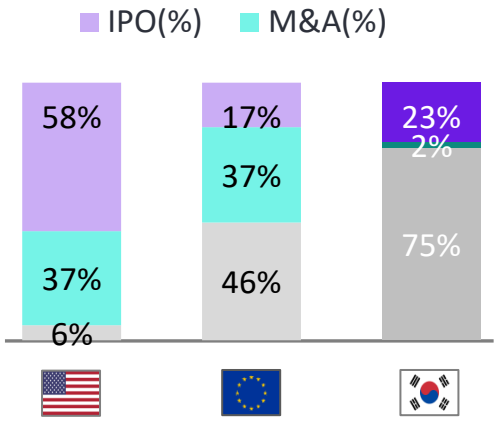
- Become less dependent on the government's FOF and develop various forms of alternative finance ecosystems

Top 10 Issues of the Korea's SE and Implications from Foreign Examples

Issue 3: Absence of an EXIT ecosystem for leading startups

Index

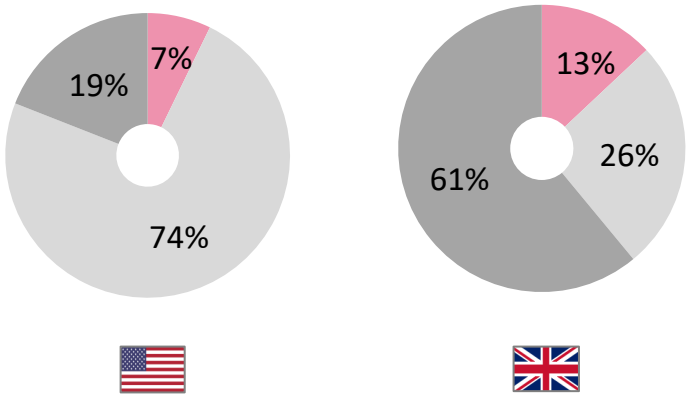
IPO/M&A Ratio VC Exit(Amount)



Total amount of VC returns

- $ 257.40 B
- $ 3.01 B
- $ 1.22 B

IPO/M&A Ratio of VC Exit(Cases)



Analysis

☑ EXIT ecosystem focused more on IPOs than M&As

- Difficult to go enter into large-scale M&As due to a smaller scale of later investment/return markets
- Less likely to make an IPO as the average duration of time needed is at least 10 years after founding

☑ Lack of Corporate Venture Capitals(CVCs) from large companies and innovative leading companies

- Insufficient cooperation with startups in the form of open innovation or CVC
- Needs to alleviate regulatory burdens and negative awareness despite efforts to alleviate regulations related to CVC

Top 10 Issues of the Korea's SE and Implications from Foreign Examples

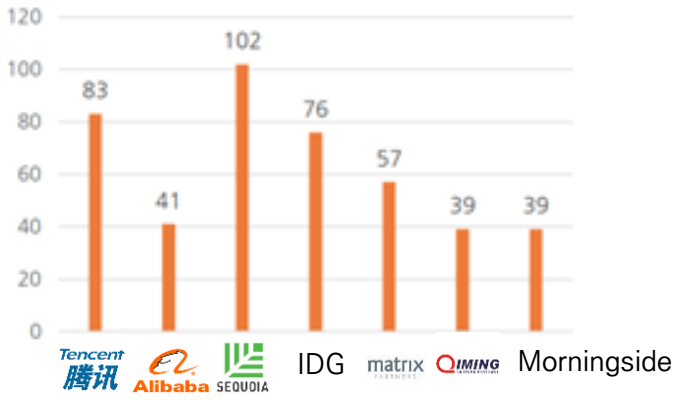
Issue 3: Absence of an EXIT ecosystem for leading startups

Example 01 CVC investment from large and big-tech companies (China & Japan)

China

☑ Investment ecosystem of big-tech companies including BATJ(Baidu, Alibaba, Tencent, JD.com)

- More than half of unicorn companies in China(52%) have attracted investment from BATJ
- Development of an autonomous ecosystem with innovative platforms needed for incubating and accelerating, manpower training, and investment
- Tencent and Alibaba each created a business ecosystem worth 10 trillion yuan over the past few years with investments and M&As of 500-600 billion yuan
  - Selected as part of the world's Top 10 Unicorn investment companies(FANG(US) not included)



Major investors of unicorns in China(Platum, 2020)

☑ CVC investment and results from Tencent

- One of the most active CVCs in China, investing in 741 companies worldwide(as of Jul. 2020)
- Investment is mostly focused in the game, entertainment, e-commerce, and fintech fields
- 70 out of 800 companies in which Tencent invested made and IPO, 160 became unicorn companies; JD.com, Perfect World Co., Ltd., Didi Chuxing, Lufax, and TouTiao have become leaders in their fields thanks to Tencent's investment
- Opened 32 Tencent WeStart(腾讯众创空间) in China including Beijing, Shenzhen, Shanghai, and Chengdu to create an open "Internet+" innovative startup service system

Top 10 Issues of the Korea's SE and Implications from Foreign Examples

Issue 3: Absence of an EXIT ecosystem for leading startups

Example 01 CVC investment from large and big-tech companies (China & Japan)

Japan

☑ Active open innovation from large companies in connection to startups

- Since the mid-2010s, there has been a great increase in CVC participation from large companies from individual VC investment – 90% of CVCs were established 2010 and afterwards, with 16 new CVCs just in 2018
- CVC investment reached up to 21.5 billion yen in 2019, which is 11.3 times greater than 2011; in 2019, it took up 9.3% of total investments, an increase from 5.3% in 2011
- In 2018, Global Brain(VC company) founded "αTrackers," a group of large companies enthusiastic for open innovation
- Tax benefits related to open innovation, which was launched from April 2020, also contribute to active CVCs (25% of the investment is deducted from the amount of income if a private company invests more than 100 million yen in a startup company of less than 10 years)

Changes in the members of the Japan Venture Capital Association (JVCA, 2019)

Top 10 Issues of the Korea's SE and Implications from Foreign Examples

Issue 3: Absence of an EXIT ecosystem for leading startups

Example 02 STAR Market(科創板) and ChiNext(創業板) (China)

Science and Technology Innovation Board(STAR Market, 科創板), China's version of NASDAQ

- Stock market for high-tech companies related to ICT, AI, bio, and new energy on the Shanghai Stock Exchange Market in 2019
- To prevent Chinese tech companies from going public on the Hong Kong/US stock markets and to grow China's capital market

Original China's NASDAQ, ChiNext(創業板)

- Subsidiary of the Shenzhen Stock Exchange that started trading in October 2009, attracting small and medium-sized high-tech firms with a purpose to finance startups with high growth potential

Features and Results of STAR Market and ChiNext

- STAR Market can list unprofitable companies with technological potential, with a listing requirement based on registration rather than approval(ChiNext also based on registration from Aug. 2020)
- 300 companies are listed on STAR Market and 900 companies are listed on ChiNext, with a world-class R&D(concentration of 8.8%/4.5%) and net profit increase(59.1%/43%)

Implications

Efforts to foster ecosystem for innovative startups led by large and big-tech companies

- Open innovation between startups and large companies + improvements on regulations to encourage CVC

Fostering strategies for domestic capital/stock market to respond to the EXIT demands

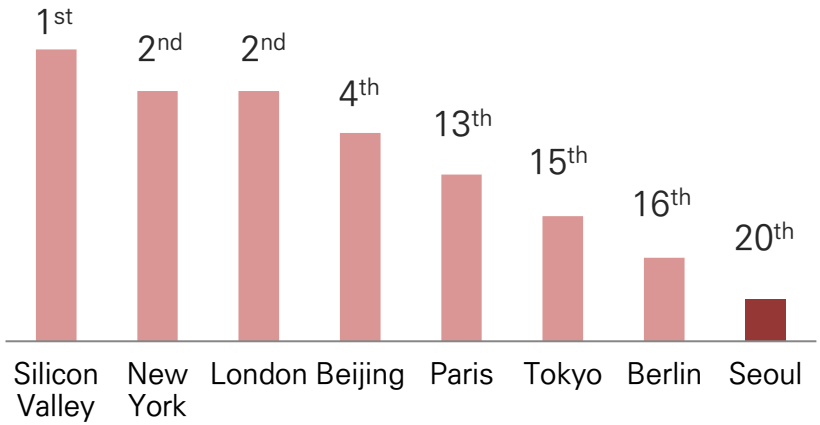
- Create an EXIT ecosystem for innovative startups with IPOs in the domestic market(ex. STAR Market)

Top 10 Issues of the Korea's SE and Implications from Foreign Examples

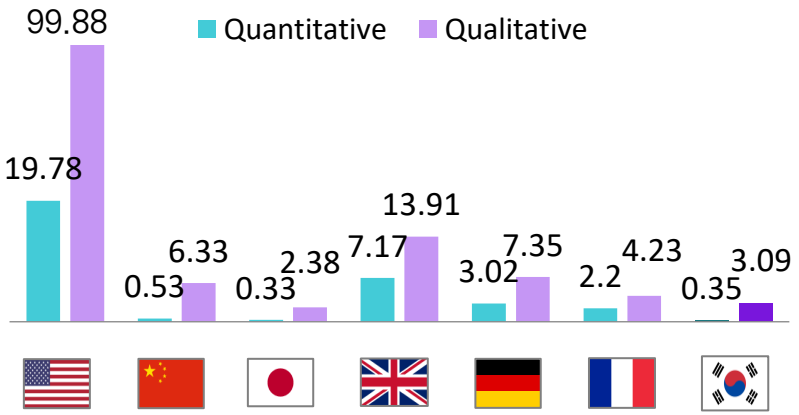
Issue 4: Lack of specialization strategies for regional startup ecosystems

Index

Startup Ecosystem of Major Cities



Levels of Support Organizations



Analysis

☑ Lack of differentiation for regional ecosystem without considering the regional innovation environment

- Although the central government and regional governments are attempting to develop startup hubs
- Policies and actions are only focused on creating the hub and quantitatively increasing the number of startups

☑ Underdeveloped regional startup support organizations and infrastructures

- Lower level of the quality and quantity of startup support services including financing, space, consultations/ mentoring, fostering, and education in rural areas compared to Seoul and metropolitan areas

Top 10 Issues of the Korea's SE and Implications from Foreign Examples

Issue 4: Lack of specialization strategies for regional startup ecosystems

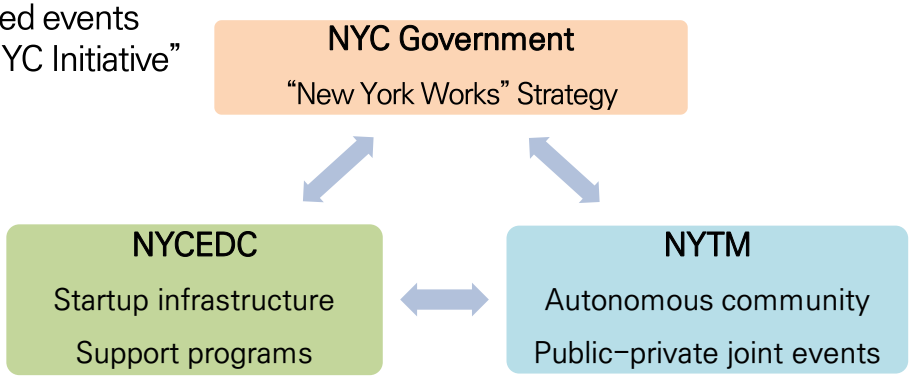
Example 01 Silicon Alley – Strategic startup ecosystem based in New York (USA)

☑ Maximizes the strengths of NYC by incorporating the regional traits and the variety of industrial structures

- Diverse City(2009): A response to the 2008 financial crisis that provides strategies to promote companies from the 8 major industries of New York City, including bio, finance, tourism, fashion, and media
- Digital City Road Map(2011): Based on Access, Education, Open Government, Engagement, and Industry
- New York Works(2017): Regional development strategies for investment in jobs for the middle class, improvement of accessibility for jobs for the middle class, and preparation for the future job market(Union Square Tech Hub, Brooklyn NavyYard)

☑ Synergistic effects with cooperation and connectivity among the NYC government, NYCEDC, and NYTM

- Combination of the New Work Works strategy of the NYC and the startup infrastructure and programs of NYCEDC
- NYCEDC offers various startup support programs in the fields of new technology(bioscience, cryptocurrency, healthcare, and cyber security), fashion, media, and food, industries that are related to New York
- NYTM is the world's largest startup meet up community that hosted events in cooperation with NYCEDC, IBM, and Gust as a part of "Digital NYC Initiative" under the sponsorship of the NYC government



Features

- Creating jobs by fostering startups related to the local traits
- Minimized political intervention from the government: Entrepreneur of the self
- Cooperation among NYC-NYCEDC-NYTM

Top 10 Issues of the Korea's SE and Implications from Foreign Examples

Issue 4: Lack of specialization strategies for regional startup ecosystems

Example 02 Development of a startup ecosystem hub (Japan)

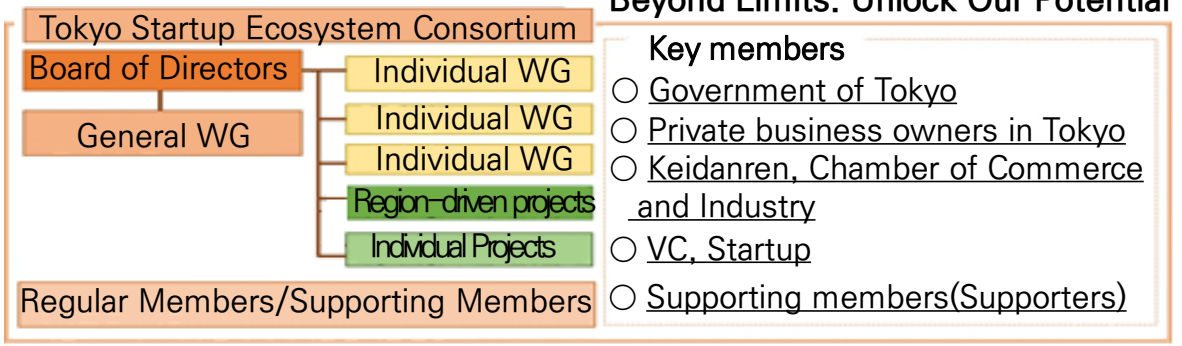
☑ **Japanese startup ecosystem hub established as a part of strategies to develop individual cities(June 2019)**

- Global hub cities(4): Tokyo, Osaka · Kyoto · Hyogo · Kobe, mid-Japan (Hamamatsu, Aichi · Nagoya), Fukuoka
- Currently planned cities(4): Sapporo · Hokkaido, Sendai, Hiroshima, Kitakyushu

7 Strategies

1. Establish global startup hub cities
2. Develop university-focused ecosystems
3. Provide world-class acceleration programs
4. Support GAP Fund for technology development startups
5. Organize startup challenges from the central and local governments
6. Encourage networks of ecosystems
7. Flexible R&D manpower

All members of the hub cities, including large companies, startups, university R&D groups, local governments, economic groups, VC, and accelerators participate in a form of a consortium



Implications

☑ **Need strategies to develop regional SEs based on the strengths of the local innovation environment**

- Private-led SE based on a deep understanding of the local innovation/industry/economic ecosystem

☑ **Local startup ecosystem governance based on the participation from various innovation groups**

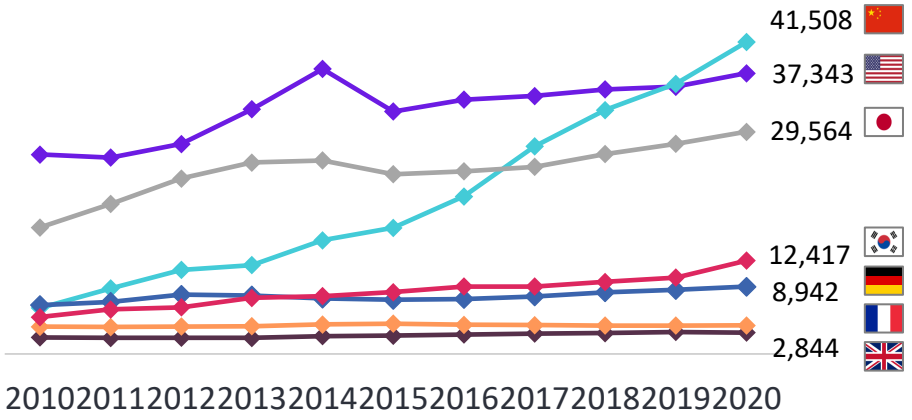
- Based on participation that meets the demands of regional innovation players, rather than the government

Top 10 Issues of the Korea's SE and Implications from Foreign Examples

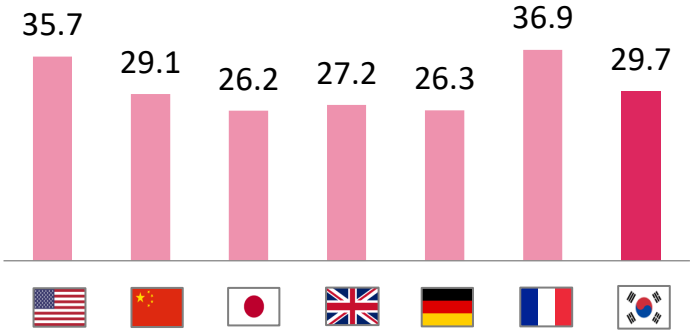
Issue 5: Absence of strategies to encourage startups in new technology/industries

Index

Number of 4IR-related PCT Patents



Percentage of Innovative Startups



Analysis

☑ Lack of connectivity between startup policies and new technologies/industries policies

- Poor technology commercialization performance despite excellent 4IR-related technology capabilities
- Lack of opportunities and vision for innovative startups in innovation policies related to new techs and industries

☑ Lack of systematic support programs according to the types of technology-based startups

- Lack of differentiated support program based on the demands from each growth stage
- Lack of mid- to long-term growth strategies and plans for technology-based innovative startups and ecosystems

Ⅲ Top 10 Issues of the Korea's SE and Implications from Foreign Examples

Issue 5: Absence of strategies to encourage startups in new technology/industries

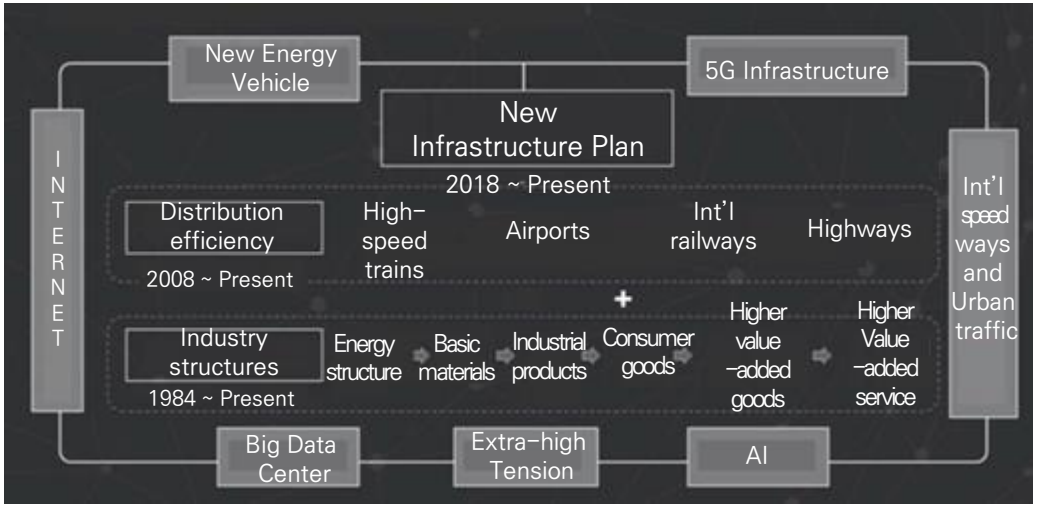
Example 01 New Infrastructure Plan(新基建) (China)

☑ New Infrastructure Plan(新基建) with a goal to upgrade data economy and industry(2018 –)

- Secure competitiveness in the technology hegemony between China and USA and develop the new innovation ecosystems by transforming the existing offline infrastructure-based supply chain to a new supply chain focused on new infrastructure
- New Infrastructure Plan officially took place to attract large-scale digital infrastructure investment as part of quantitative easing after the COVID-19 pandemic(34 trillion yuan, or approx. 6,000 trillion won)
- The National Development and Reform Commission(国家发展改革委) designated 3 fields of the New Infrastructure Plan as information, convergence, and innovation infrastructure, and classified the seven industry chains of 5G, AI, Big Data, IoT, extra-high tension, inter-city railroads and rail transit

☑ Companies that participate in 新基建

- 500 companies can be classified into 1) Comprehensive companies(Hwawei, Alibaba, Tencent, etc.), 2) Industry leaders(Lenovo, BOE Technology, etc.) and 3) New high-growth companies(CATL, iFLYTEK, etc.)
- Top 100 companies with entrepreneurial capabilities in China's New Infrastructure Plan(2020)
  – 32 AI/Big data, 28 Cloud services, 7 Robotics, 7 IoT, 6 autonomous driving, etc.



The development of China's supply chain and the New Infrastructure Plan (by Li Feng of Fengrui Capital)

Top 10 Issues of the Korea's SE and Implications from Foreign Examples

Issue 5: Absence of strategies to encourage startups in new technology/industries

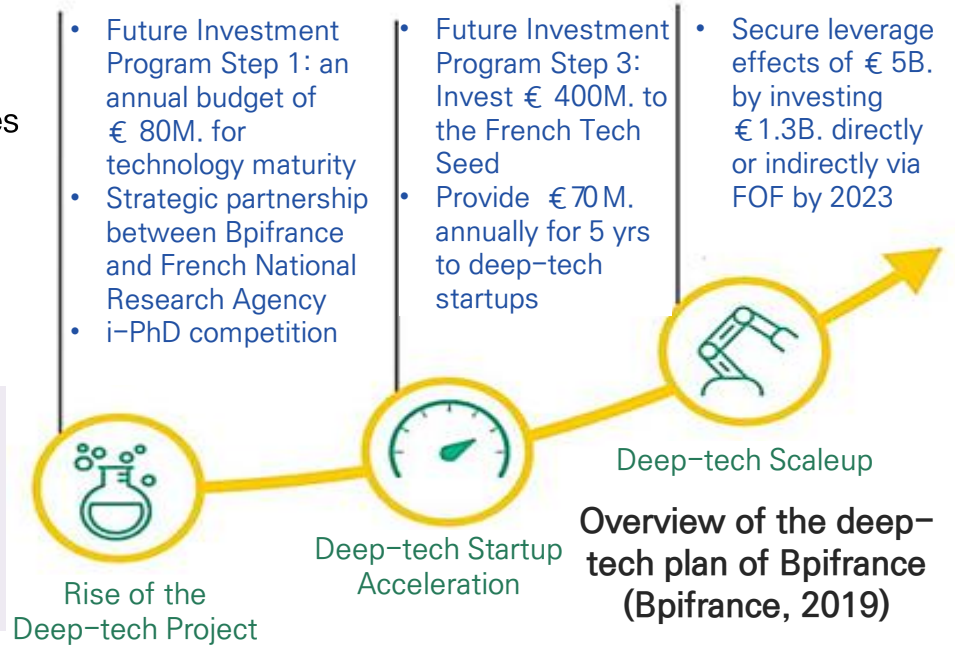
Example 02 Deep-tech investment support plans from Bpifrance (France)

Features of the Bpifrance Deep-tech Plan(2019~)

- Organize the deep-tech startup support according to growth stages of "project – acceleration – scaleup"
- Secure leverage effects of approximately 5B euros by investing 1.3B euros in over 2,000 deep-tech startups from 2019-2023

Deep-tech Project Selection Criteria

- Project based on teams/governance with strong links to laboratory (public/private) projects or the science sector(science/core technology)
- Projects with high entry barriers due to technological obstacles
- Projects that are strongly competitive
- Projects that are long-term, comprehensive, with capital-intensive commercialization strategies



Overview of the deep-tech plan of Bpifrance (Bpifrance, 2019)

Implications

Improve consistency with startup policies and innovation policies

- Foster innovative companies based on clear technology and innovation vision and goals at the national level

Establish comprehensive support policies to assist deep-tech startups

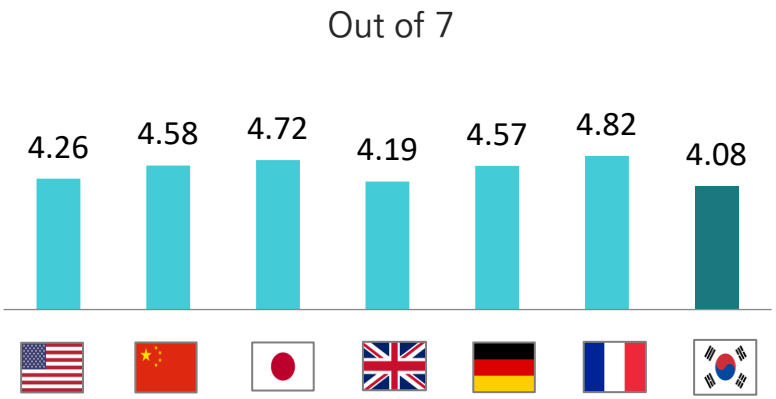
- Focus on a systematic support for technology startups with great innovative growth potential

Top 10 Issues of the Korea's SE and Implications from Foreign Examples

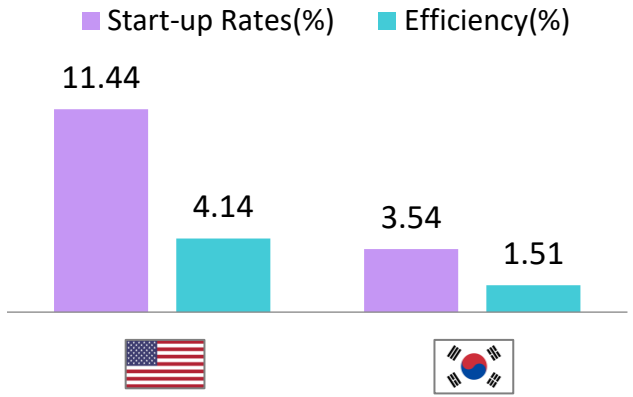
Issue 6: Low commercialization success rates for public technology

Index

Level of R&D Transfer



Performance of Technology Transfer



Analysis

☑ Passive roles from universities and public research institutes in the industry–academy cooperation

- Industry–academy cooperative relationships with universities and public research institutes should take on active roles in terms of demand–based innovation and open innovation

☑ Inadequate roles from local open innovation hubs and professional institutions

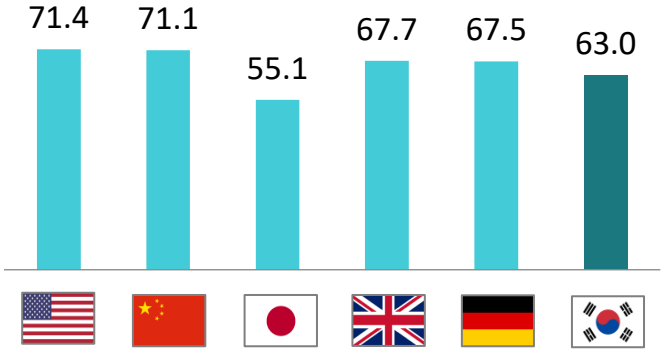
- Most of the local corporate support institutions and agencies in Korea are focused on corporate support services rather than connecting the supply(research) and demand(business)

III Top 10 Issues of the Korea's SE and Implications from Foreign Examples

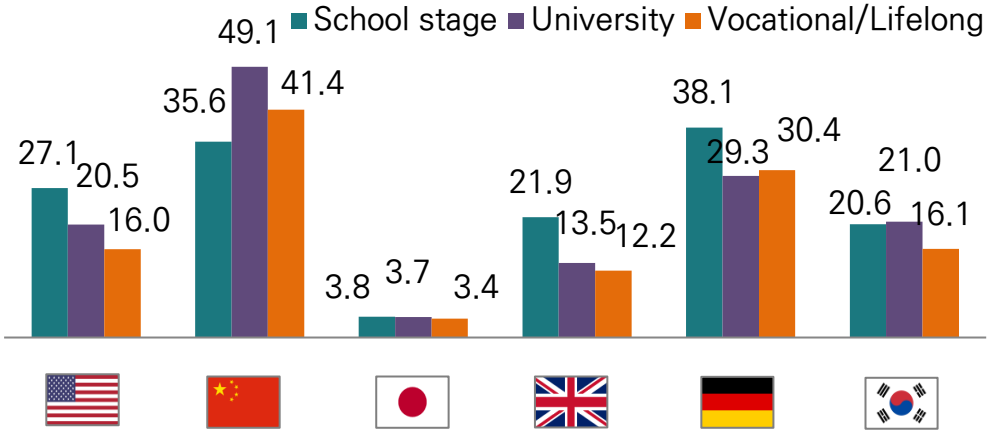
Issue 7: Lack of an education system for developing entrepreneurship and startup skills

Index

Level of Entrepreneurship



Experiences of E-ship Education



Analysis

☑ Lack of access to systematic entrepreneurship and startup education by stages of the life cycle

- Low entrepreneurship compared to levels of entrepreneurial activities or intentions(creativity, innovativeness, etc.)
- Implement startup education in not only universities but also during school-age and career/lifelong education

☑ Limitations in university startup education focusing on supply/theory rather than demand/practical

- Despite a large scale of startup education in universities, but focused on theory to secure support from the govt.
- Limited roles of universities contributing to the local startup ecosystem

Ⅲ Top 10 Issues of the Korea's SE and Implications from Foreign Examples

Issue 7: Lack of an education system for developing entrepreneurship and startup skills

Example 01 Greater access and universality of e-ship and startup education (USA)

☑ Continuous education according to the stages of the life cycle from K-12, university, to community

- Experiential learning provided at the K-12 level to improve creativity, challenging spirit, and understanding of businesses
- Foster future innovation entrepreneurs with integrative thinking with STEM education
- Alll business schools offer e-ship/startup related majors/minors and curriculums focused in experience and on-site practice
- Startup support centers at universities have critical roles in the development of the local startup ecosystem

K-12	STEM	Private	University
Experiential Learning : Learning by Doing	Improving STEM Literacy Foster innovation leaders with STEM education	Entrepreneurship education provided by various institutions at the K-12 level	Major/Minor and curriculum Role of the startup support centers as entrepreneurial hubs
• Project-centered education • Meet-up with startup CEOs • Field trips to companies • Making business maps in the local community • One-day business trials • Organize startup/ entrepreneurship committees • Parent business leader groups	• Advanced innovation and e-ship education with STEM • STEM ecosystem that oversees the entire community • Allow computerized thinking to be a convergence factor for all types of education • Increase of digital platform for teaching and learning	• Starter High(The Brain Hamilton Foundation): Case studies on youth entrepreneurs for teens • Cisco's Global Problem Solvers • Microsoft's Minecraft • VentureLab's entrepreneurship education program at home • Tinkergarten's outdoors activity to develop entrepreneurship	• Entrepreneurship Major • Entrepreneurship Center • Internship in Startup • Entrepreneur-In-Residence • Entrepreneurship Club • Mentor Group • Business Idea, Business Plan • Seed Funds • Summer Accelerator Program…

Top 10 Issues of the Korea's SE and Implications from Foreign Examples

Issue 7: Lack of an education system for developing entrepreneurship and startup skills

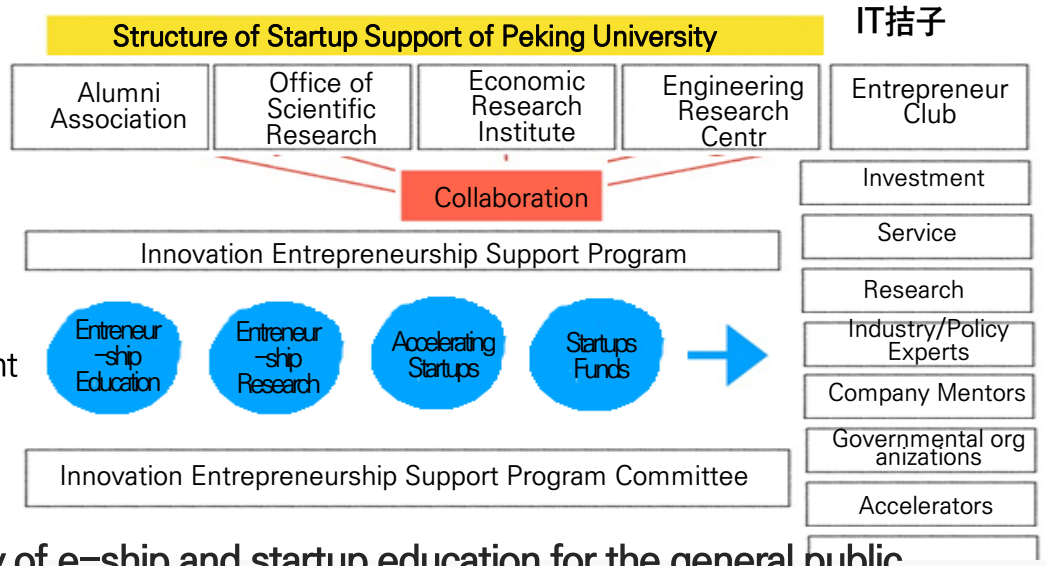
Example 02 Universities as the cradle of entrepreneurs in the new economy (China)

Entrepreneurs from major universities in China

- Top 4 universities in innovative entrepreneurs Tsinghua – Peking – Jiao Tong – Zhejiang University

Example: Peking University's support for the EE

- Robin Li from Baidu, and Liu Qing from Didi Chuxing are Peking University graduates
- School announced "Peking University Innovation Entrepreneurship Support Program" in 2012 and established the "Entrepreneurial education research accelerating fund" to support youth entrepreneurs
- Organizes Peking University Entrepreneurship Investment Fund, and 1898 Venture Capital



Implications

Increase accessibility and universality of e-ship and startup education for the general public

- Guarantee access to infrastructure and quality of programs for everyone to receive startup education

Develop a virtuous cycle of startup and investment from successful alumni entrepreneurs

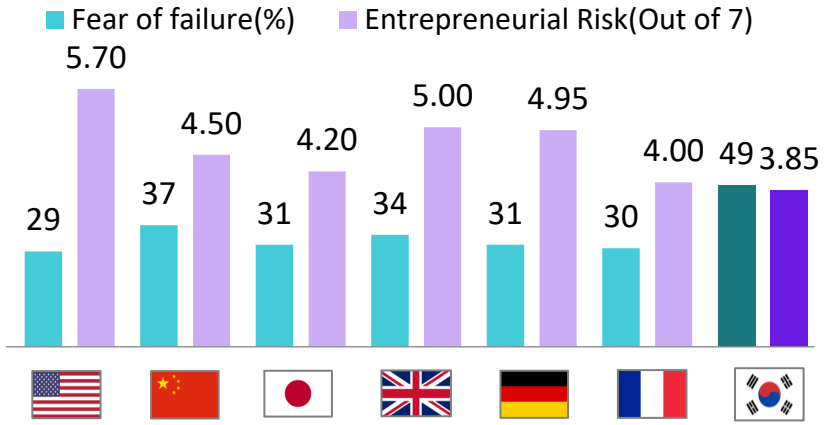
- Importance of alumni entrepreneurs in the development of university-centered startup ecosystem

Top 10 Issues of the Korea's SE and Implications from Foreign Examples

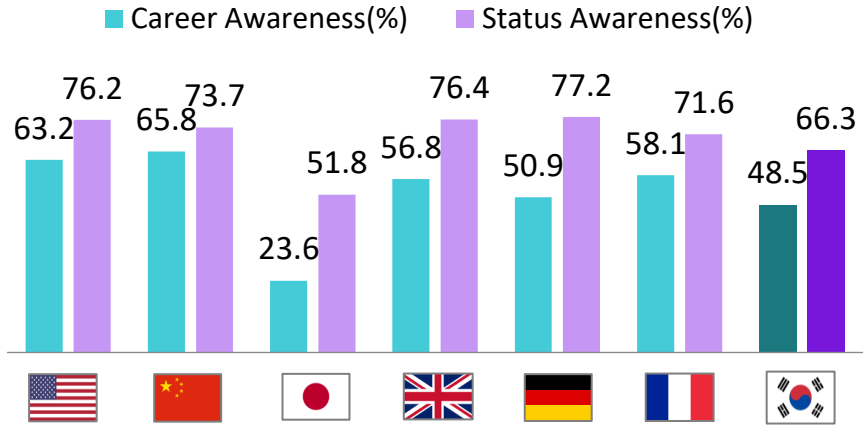
Issue 8: Negative social awareness on startups and absence of a social safety net

Index

Fear of Failure and Risk Taking



Career and Status of Entrepreneurs



Analysis

☑ Fear of failure of startups from absence of a social safety net

- Despite a large financial support for startups, there is a lack of supporting measures for a living of entrepreneurs
- Lack of institutional support regarding the labeling effect and return to society in case of failures

☑ Limitations in the social awareness on (successful) entrepreneurs and startups

- Need to set up a vision of startup policies to develop entrepreneurship and entrepreneurial culture
- Create a social atmosphere where anyone can choose to become entrepreneurs

Top 10 Issues of the Korea's SE and Implications from Foreign Examples

Issue 8: Negative social awareness on startups and absence of a social safety net

Example 01 Offensive Startup Campaign "GO" and startup subsidies (Germany)

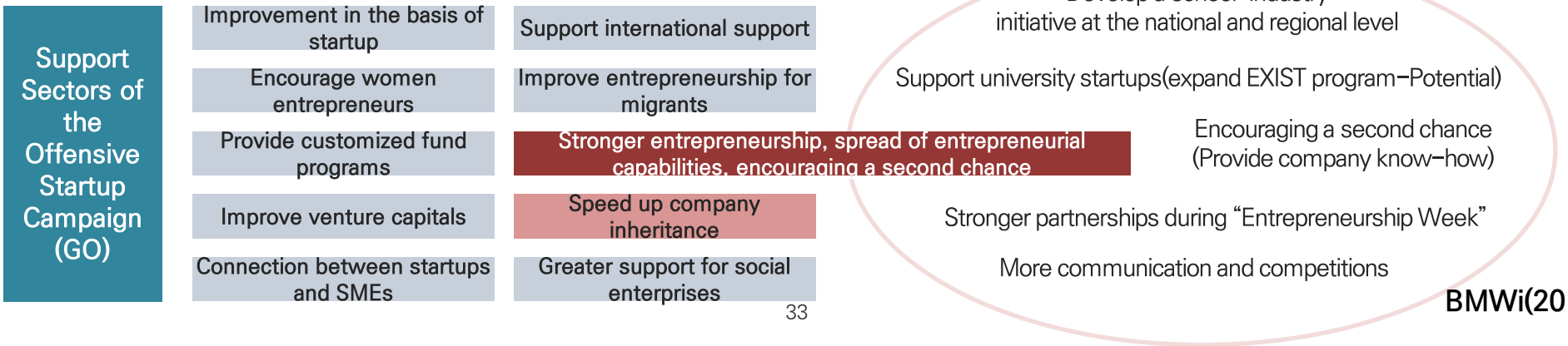
Gründungsoffensive

☑ **To respond to the decline of entrepreneurship in the society and the spread a startup culture(Nov. 2018)**

- Respond to the need of startup focused support strategies such as the inheritance of key technology and know-how, future-oriented jobs, and increased global competitiveness
- Emphasis on social awareness on entrepreneurs to create a sense of entrepreneurship and startup in the community

☑ **Prioritized "Stronger entrepreneurship, spread of entrepreneurial capabilities, encouraging a second chance"**

- Includes entrepreneurship education in schools, providing information on startups and hosting events, organizing entrepreneurship week, second chance support program, etc.
- Gründungsoffensive also Includes inheritance of companies in the broad sense of entrepreneurship to emphasize that there should be as much social awareness and support regarding startups



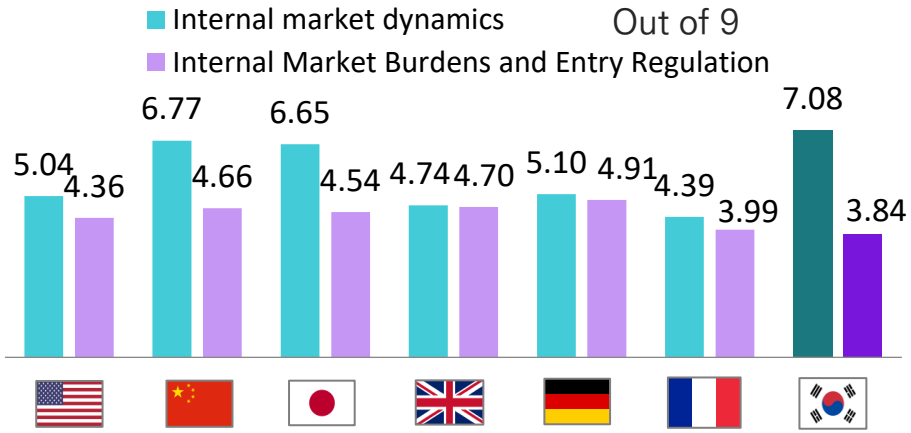
BMWi(2018)

Top 10 Issues of the Korea's SE and Implications from Foreign Examples

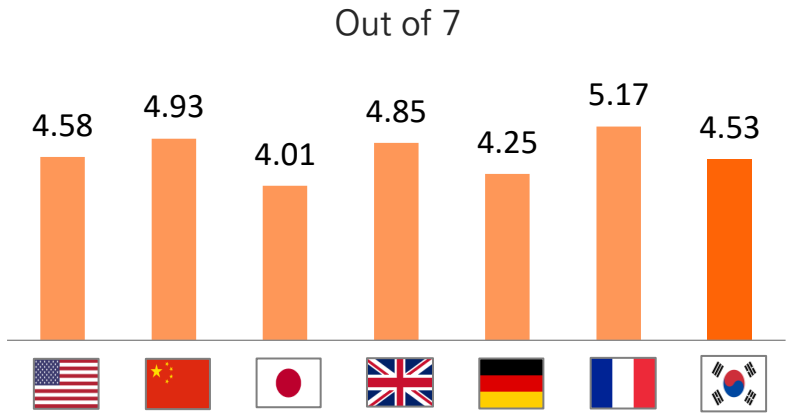
Issue 9: Regulations and high entry barriers to entrepreneurial and business activities

Index

Market Dynamics and Entry Barriers



Tax and Bureaucracy



Analysis

☑ There are still strong regulations and burdens related to entrepreneurial activities

- Administrative burden to start a business has been reduced in recent years(see "Starting a Business" from WBDB)
- Issues come from tech/biz to enter the market and lack of efforts from government officials to improve regulations

☑ Gap between entrepreneurial activities due to lack of access to environment to found a startup

- Vulnerable groups in terms of access and results of entrepreneurial activities by gender, region, and age
- Lack of accessibility and universality to infrastructure that allows anyone to realize their ideas into a startup

Top 10 Issues of the Korea's SE and Implications from Foreign Examples

Issue 9: Regulations and high entry barriers to entrepreneurial and business activities

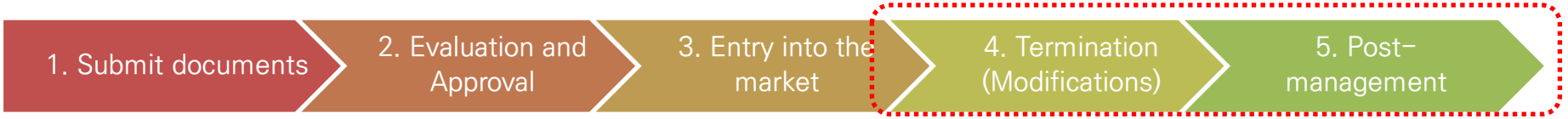
Example 01 Fintech Innovation and startup activities with regulatory sandbox (UK)

Regulatory sandbox of the UK aims for innovation, rather than simply easing regulations

- The Financial Conduct Authority(FCA) of the UK implemented a regulatory sandbox for the first time for the Fintech sector in 2016
- If existing regulations in the finance sector are to be completely eased to introduce a new type of business, it is difficult to estimate the possibilities and scope of damage and its effects, which brings the need for a regulatory sandbox
- Startups included in the Fintech regulatory sandbox have invested 135 million£, out of which 80% continue to be in operation

FCA's regulatory sandbox has a 5-step process, with modifications and post-management after the termination

- Submitting documents – evaluation and approval – entry into the market – termination(modifications) – post-management
- Step 4: Modifications
  – Although UK is not enthusiastic in modifying the law, it takes a principle-based approach rather than Korea's rule-based approach which gives FCA great autonomy
- Step 5: Post-management
  – FCA provides consultations for companies to follow the regulation after participating in the sandbox by establishing strategies for licensing and providing signposts with a Case Officer
  – Provides opportunities for global demonstration via networks with other countries, such as the Global Fintech Innovation Network(GFIN) and the Global Sandbox



5 Steps of the FCA Fintech Regulatory Sandbox in the UK(Choi, 2021)

Top 10 Issues of the Korea's SE and Implications from Foreign Examples

Issue 9: Regulations and high entry barriers to entrepreneurial and business activities

Example 02 Zero Barriers Movement (USA)

☑ Kauffman Foundation announced "Zero Barriers to Startup" with its 2017 Entrepreneurship Report

- Find and eliminate practical obstacles that create a gap among race or other sociodemographic groups, socioeconomic and geographical groups in opportunities for entrepreneurial activities and growth within the startup ecosystem
- Fact 1: 80.2% of entrepreneurs in the USA are white, and 64.5% are male
- Fact 2: The proportion of entrepreneurial activities in the rural areas decreased from 20% in the 1980s to 12.2% in 2017

☑ Close cooperation within the community, including the governments, universities, and the general public

- Development of an inclusive and healthy startup ecosystem where all Americans can obtain the knowledge, skills, and support for a startup in their community regardless of age, race, gender, and educational background
- Community's startup support systems and organizations* are highly efficient and closely connected to the SBA and SBDC in accordance to the federal policies and the state government policies
  * Innovation Centers, Women's Business Center, Incubators and Accelerators, University Entrepreneurship Centers, VC/Angel Association, Regional Business Idea Pitch Competition, Alumni & Entrepreneurs Group for Young Entrepreneurs…

Implications

☑ Easing of regulations for more innovative startups in the field of new technology and industries

- Develop a new business ecosystem such as providing consultations on entering the market

☑ Eliminate practical obstacles for universality and accessibility to startup activities and ecosystem

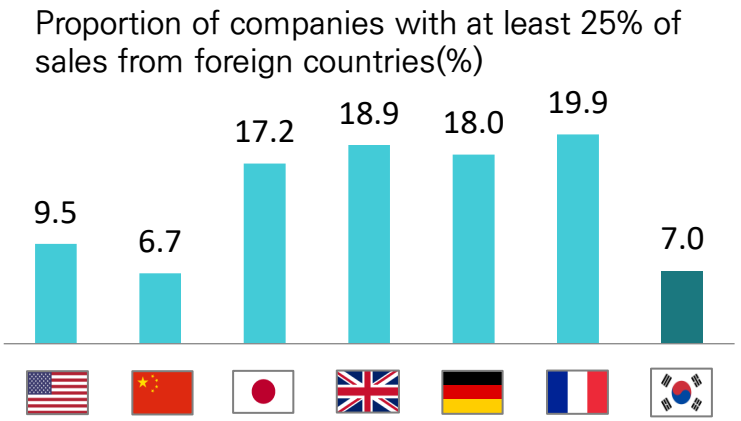
- Develop universal infrastructure and entrepreneurial culture that allows anyone to found a startup

Top 10 Issues of the Korea's SE and Implications from Foreign Examples

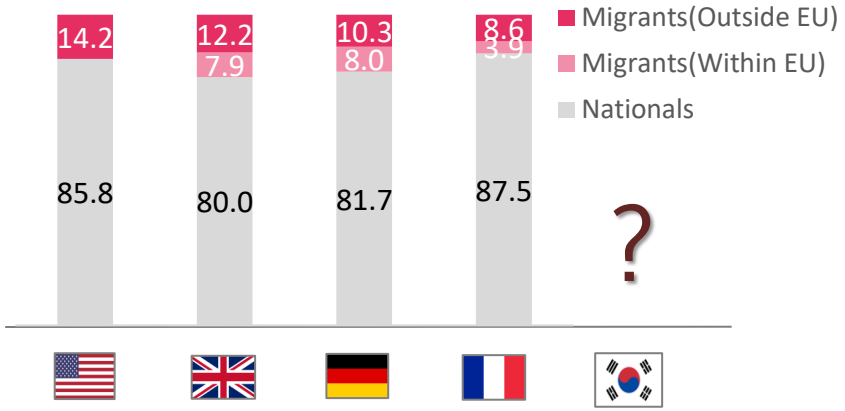
Issue 10: Low levels of globalization of startups and the startup ecosystem

Index

Entering Foreign Markets



Foreign/Migrant Entrepreneurs



Analysis

☑ Insufficient entry into the foreign market and systematic globalization support programs(Outbound)

- Poor startup globalization due to geographical/language barriers and lack of innovation of the business models
- Only a few policies focus on the globalization of startups among the startup support policies and programs

☑ Insufficient support policies for excellent foreign entrepreneurs(Inbound)

- There has not been a review on their entrepreneurial activities in Korea
- Lack of political support for foreigners and migrants such as entrepreneur visa programs and exclusive funds

Top 10 Issues of the Korea's SE and Implications from Foreign Examples

Issue 10: Low levels of globalization of startups and the startup ecosystem

Example 01 La French Tech's strategy to become a global startup hub (France)

La French Tech, aiming for globalization from the start(2013~)

- (Purpose) Globalization of the SE for startups to enter the foreign market and to attract foreign investment and entrepreneurs
- (Branding) Efforts to make the "La French Tech" brand to enhance international visibility of French starup ecosystem
- (Organization) Director General for Enterprises and the Director General of the Treasury from the Ministry of the Economy and Finance, Investment Committee, and the Ministry of Europe and Foreign Affairs involved in the Mission French Tech

Programs related to the globalization from La French Tech

- French Tech Visa: Quick process to get a visa for foreign entrepreneurs
  - Entrepreneurs receive a visa within one week after signing up
  - No minimum education level, with work permit provided for spouses
  - For not only entrepreneurs, but also employees and startup investors
- French Tech Ticket: Program to attract foreign startups to France
  - Selected 50 projects are given 25,000 euro per team member with quick processes for permanent residency, investment from BPI France, and entry to the startup incubators
  - 1,372 project funded from over 100 countries in 2019
- French Tech Community: Strategies to develop a global hub
  - 13 French Tech Capitals in France, 45 French Tech Communities in France, and 63 in foreign countries are all connected as a giant global ecosystem network

Global Network of French Tech Communities
(from La French Tech Homepage)

Top 10 Issues of the Korea's SE and Implications from Foreign Examples

Issue 10: Low levels of globalization of startups and the startup ecosystem

Example 02 Startup support policies for migrants (Germany)

☑ Entrepreneurship policies for migrants are focused on the integration to the German society and the job market

- The Recognition Act(Anerkennungsgesetz) and the Immigration Act for Skilled Workers(Fachkräfteeinwanderungsgesetz) contributed to not only attracting foreign experts to Germany but also developing entrepreneurship of migrants
- In an effort to improve entrepreneurship for migrants, there were 1) greater visibility of the migrant entrepreneurship, 2) widespread social awareness on the equality of private businesses and dependent work, 3) digital support infrastructure, 4) improved accessibility to funds, and 5) efforts to implement policies and build networks

☑ Various startup support policies for migrants at the federal and local government levels and the private level

- Federal government: IQ Competence Centre on Migrant Entrepreneurship(BMAS), Female refugees start their own business (Frauenmit Fluchterfahrung gründen)(BMFSFJ), and the Migrant Economy for Rural Communities(MIGOEK)(BMBF)
- Regional government: Initiative of Self-Employed Migrant Women
- Private level: SINGA Germany for refugee entrepreneurs

'Berlin Newcomer Startup Award' (Berlin's SenWiEnBe and SINGA Business Lab)

Implications

☑ Efforts needed to improve global openness and diversity throughout the startup ecosystem

- Consider not only the outbound of startups but also the inbound of excellent foreign entrepreneurs

☑ Need to establish active startup support policies for foreigners and migrants in Korea

- Set up support programs for foreign entrepreneurs based on status and difficulties in their startup processes

Ⅳ Conclusion: Directions for the Development of Future SE in Korea

Summary of benchmarking implication for Korea's Startup Ecosystem

Entrepreneur/Startup

- More popularity of startups (Remove obstacles and gaps)
- Greater accessibility of startup support infrastructure

Company/Performance

- Focus on scaleup support system by growth stages
- Investment and fostering from large and leading companies(CVC)

Finance

- Better expertise in the investment market by growth stages of startups
- EXIT market focusing on M&As

Support Organization/Infra

- Autonomous/participatory local startup ecosystem
- Stronger cooperation among the private, public and individual

Technology/Knowledge

- Foster SE specialized in emerging technological fields
- Improve technological support for universities and research institutions

Education/Human Resources

- Establish a lifelong startup education system
- Improve quality of education focused on on-site practice

Culture/Awareness

- Subsidies for entrepreneurs at the early stage of startups
- Improve social awareness on failures and second chance

Policies/Regulations

- Branding and governance related to startup policies
- Relieve regulations related to new technology and industry

Globalization

- Improve policies to attract foreign entrepreneurs such as visas
- Ease regulations for foreign VC investments and provide tax benefits

Ⅳ Conclusion: Directions for the Development of Future SE in Korea

Policy directions for the development of Korea's Startup Ecosystem

3. Valuable Startup

Leader in (national/regional) economy

Leader in technology

Leader in society

Strategy Leadership

1. Startup in Life

2. Startup with Growth

4. Startup Nation

Representativeness Legitimacy

Universality Accessibility

Effectiveness Sustainability

More candidates for future entrepreneurs

Interested group of youth (Elite-driven)

Region

Foreigners

Middle-aged

Women

Entering into a startup process

Competition/Elimination/Revive/Recovery
(Growth of companies with excellent capabilities)

Ⅳ Conclusion: Directions for the Development of Future SE in Korea

01 Startup in Life ▸▸ Startup! For Anyone, Anytime, Anywhere

Vision Providing equal opportunities for entrepreneurial activities and environment

☑ (Preparation/Education) Improve the quality and accessibility of e-ship/startup education across all ages

- Provide a universal education program based on demand for all citizens and prospective entrepreneurs across all ages
- Focus on on-site education that provides actual knowledge and know-how instead of theoretical lessons, and provide more opportunities to indirectly experience entrepreneurial activities such as internships at startups
- Provide startup education for those seeking a job or dissatisfied with their jobs to offer startups as an alternative career plan

☑ (Universality) Improve the universality and diversity of entrepreneurial activities – reduce the gap

- Encourage women to become entrepreneurs and provide more specialized support(startup hub, accelerations, funds, etc.)
- Provide more support for middle-aged entrepreneurs to assist startups after retirement and improve manpower utilization
- Develop regional-based entrepreneurial activities and ecosystem(reduce the gap with the ecosystems at the metropolitan areas)
- Greater support for entrepreneurial activities of the socially vulnerable group, foreigners, North Korean defectors, etc. (entrepreneur visa and strategies to attract foreign entrepreneurs)

☑ (Accessibility) Improve accessibility to and effectiveness of the physical and support infrastructure for startups

- Develop a regional-based entrepreneurial hub based on private-public cooperation(link between government policies and private programs, cooperative programs among major parties of the ecosystem, etc.)
- Provide small-scale startup hubs with high efficiency that focus not on the supply but on the demand
- Transform public facilities(i.e. Community Service Centers) into startup/innovation hubs to provide more startup support services for the general public

Ⅳ Conclusion: Directions for the Development of Future SE in Korea

02 Startup With Growth

▸▸ Startup! Fostering Promising Companies

Vision Establish a private/market-led support ecosystem for scaleup of companies

☑ (Private-led/Expertise) Professional entrepreneurial support ecosystem and infrastructure by growth stages

- Supporting services throughout the entire growth stages of startups with resources invested by private professional startup support organizations including large and leading companies instead of government-led programs
- More fostering and support for private professional startup support organizations(create competition among organizations by preventing the dependence on government budget)
- Organize (national/regional) institutions focused on scaleup and provide various networking activities for opportunities to grow

☑ (Capital market) Improve the investment ecosystem by growth stages and EXIT success rates with active M&As

- Decrease dependence on FOF from venture capitals and encourage risk investment
  (set up competition, extend period of existence for funds, transformation to leading deals, greater carried interest, etc.)
- Improve policies and tax benefits to encourage alternative investment for startups in their early stages such as angel/P2P/CF
- Encourage acceleration program of great quality by improving assessment criteria for the accelerator registration system
- Policy support and easing of regulations to encourage CVC from large and leading companies for more M&As in the EXIT market

☑ (Globalization) Reconciliation between outbound and inbound policies to become a global startup ecosystem

- (Outbound) Foster world-class and platform companies in emerging technology and industries rather than unicorn companies
- (Outbound) Introduce strategies to make use of overseas innovation entrepreneurial hubs to provide market opportunities for new startups based on cooperation with global innovation projects(effective use of K-Startup Centers, etc.)
- (Inbound) Attract excellent foreign entrepreneurs and increase openness for the investment and incubation sectors, technology developers and management, and other service sectors within the startup ecosystem

Ⅳ Conclusion: Directions for the Development of Future SE in Korea

03 Valuable Startups

▸▸ Startup! Beneficial for All

Vision Foster startups that are needed by the country, region, industry, and the society

☑ (Technology) Connection between national innovation strategies and startup policies

- Encourage innovative startups in the fields of 4IR, digital transformation, low-carbon and eco-friendly areas
- Connect between the core national tech agenda such as the Digital New Deal and Carbon Neutrality 2050 and startup policies
- Establish strategic public procurement policies based on the government's technology innovation roadmap
- Provide greater support for technology commercialization of public research – Roles of universities and public research institutes

☑ (Economy) Startup policies to create jobs and enhance industrial competitiveness at the national/regional level

- Provide greater support for high-growth companies and with great contribution to the economic development of the country
- Encourage and support the growth of startups in regional specialized industries
- Establish an autonomous and participatory innovation/business platform within the regional startup ecosystem
- Develop a 'super-' regional innovation/startup ecosystem that allows for an extensive convergence of new industries and technology among cities with specialized industries and technological capabilities

☑ (Society) Policies to encourage startups that create social value through solving common problems

- Support "Big Challenge Startup" to solve issues of the humanity and the community
- Improve competitiveness of business model and enlarge the scale of social ventures and social enterprises
- Encourage startups with data-based public innovation in digital government programs for the public welfare

Ⅳ Conclusion: Directions for the Development of Future SE in Korea

01 Startup in Life

▸▸ Startup! Making an National Brand

Vision Establish a national brand of startup policies and a unique entrepreneurial culture

☑ (Branding) Introduce philosophy and goals for Korea's startup policies and branding strategies

- Set up the philosophy of the national startup policies as "innovative startup ecosystem to become a global leader country in innovation" and set up policies that are consistent to the philosophy
- Develop a brand for Korea's startup policies such as the Tech Nation(UK), Business Finland(Finland), and La French Tech(France)
- Set up goals and monitoring systems for core indices in terms of quantitative growth such as sales and creating jobs, and qualitative growth such as solving social issues by social venture and market dominance by global leading and unicorn companies

☑ (Governance) Establish a control tower for startup policies to integrate and unify the startup support system

- Provide greater roles to a separate pan-government startup policy control tower in consideration of the ripple effects of the startup policies on the overall economy and society(in the form of projects with government officials and experts from the private such as experts in industry-academy-research and in the corporate support organizations)
- Integrate and unify the startup policies in accordance to the national vision and goals of startup ecosystem, set up performance measures and systematically monitor current levels of the startup ecosystem

☑ (Culture) Improve social awareness on startups by successful entrepreneurs and a solid social safety net

- Provide indirect support such as subsidies for a living for entrepreneurs aside from direct financial support to startups
- Provide more support programs for those in failures and re-startup activities, and greater support for recovery such as their indirect participation in the startup ecosystem
- Providing startup management knowhows and reinvestment of return from the firm's EXIT in the startup ecosystem by successful entrepreneurs

아산나눔재단
THE ASAN NANUM FOUNDATION

Thank you!