



# Typology of Ecosystems

-Comparison among three areas:  
Silicon Valley, Shenzhen, Gothenburg-

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# Preface

This presentation is based on the joint presentation with

- Dr.NorikoTaji(Hosei University) : Gothenburg, Sweden
- Dr.Asei Ito(Tokyo University) : Shenzhen, China
- Dr.Kanetaka.Maki(Waseda University) : Silicon Valley, U.S.

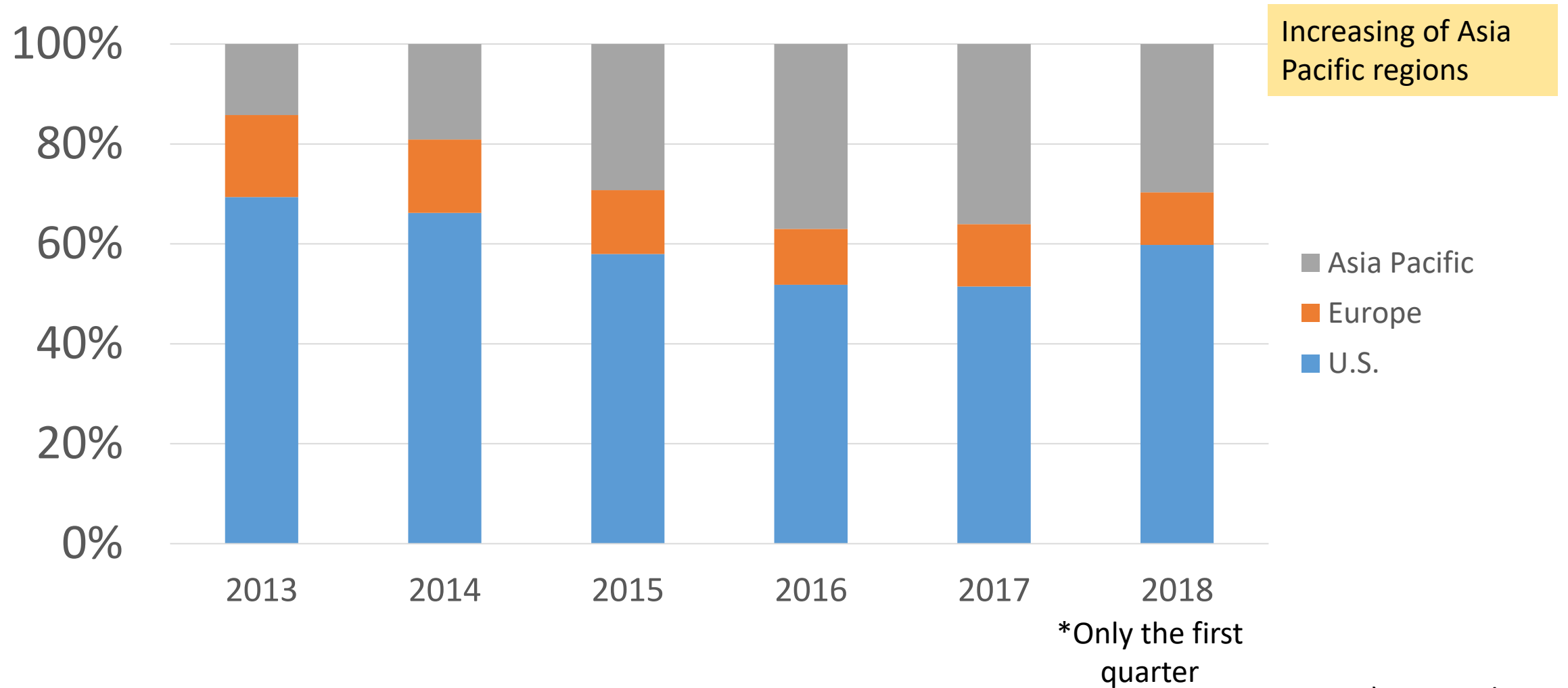
at research meeting of the Association of Organizational Science held on September 10<sup>th</sup> in 2018.

# Ecosystems in transition

- Is the world flat?
  - Platforms across the countries have appear.
  - Movement of talents and human resources across the boundaries have been more active.
  - Copying the business models in the advanced countries are prevalence (Time Machine Management).
- The end of “Cloning Silicon Valley” ?
  - Rising of ecosystems in Asian countries
    - Ecosystem in Asia may learn from SV, but they also show differences.
  - Unique Europe
    - Anti-America?? Walking in the unique way??
    - Collaboration between the traditional industries and the new industries are pursued.

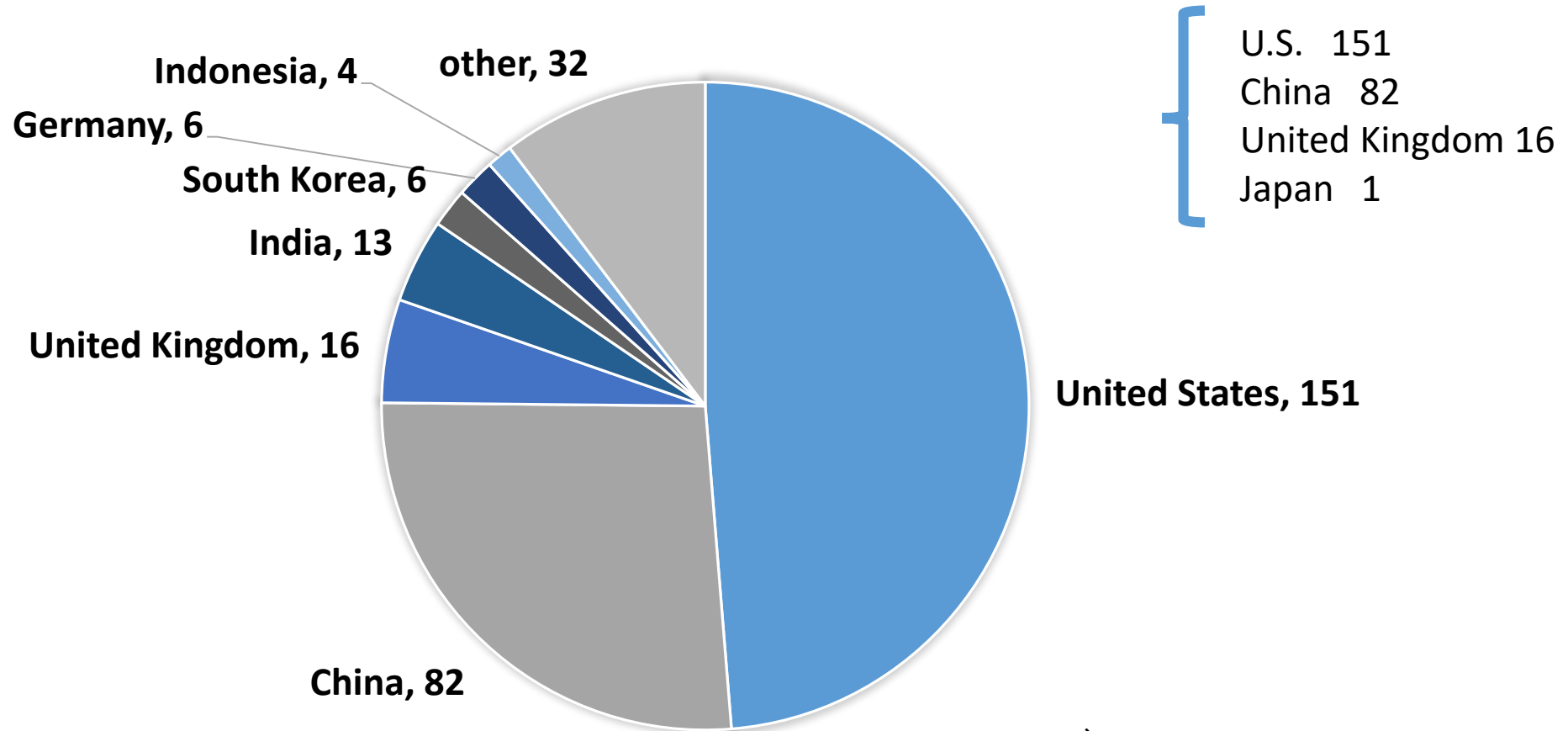
# Startups backed by VC

(The number of companies invested by VC)



Source) CB insight

# World unicorns(2019)

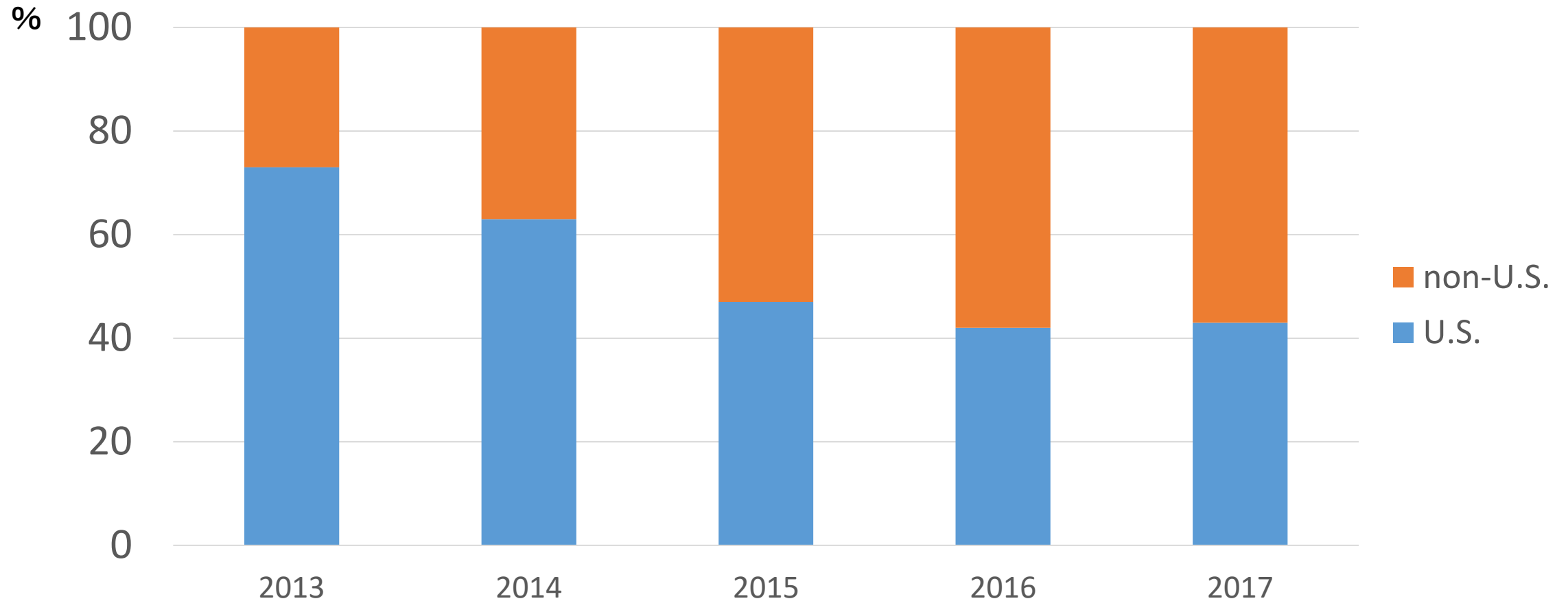


source) CB insight

# Home ground of unicorns

(As of September, 2017)

Non-U.S. Unicorn have increased.





# Research Question

- Although Silicon Valley is still the most innovative ecosystem in the world, new types of ecosystem are gaining power in other regions.
- “From monopole to multipolarity”



- Are new ecosystems just “copy of silicon valley ecosystem” or “new type of ecosystem”?
- What’s new with new ecosystems?
- What kind of viewpoints are needed for research on ecosystem?
- How do Japanese companies utilize the change?



# Comparison criteria

- Overview
  - History, Culture, Main Industry
- Human factor
  - Entrepreneurs, Network of entrepreneurs, Human resources, Labor market
- Government
  - Support from the central government or the local government
  - Feature of policy settings and policy implementation
- Local players
  - Money provider (Funder), Large companies, Universities
- Performance
  - Innovation, Target market, Number of unicorns, Exit strategy, Success rate

# Overview of comparison

Silicon Valley (U.S.)	Shenzhen (China)	Gothenburg(Sweden)
<ul style="list-style-type: none"> <li>• <u>Innovation core</u></li> <li>• Global, Open, Variety</li> <li>• Abundance of excellent workers</li> <li>• Abundance of risk money</li> <li>• High rates of birth and death rate</li> </ul>	<ul style="list-style-type: none"> <li>• <u>Backed by the central government</u></li> <li>• <u>Medium scale (between prototyping and mass production) manufacturing and assembling.</u></li> <li>• <u>Flexibility, speed, and low costs are competitive advantage</u></li> <li>• Abundance of excellent workers, but most of them are Chinese</li> <li>• Backed by the central government</li> <li>• High rates of birth and death rate</li> </ul>	<ul style="list-style-type: none"> <li>• <u>Pursuing “modest growth”</u></li> <li>• European oriented</li> <li>• Major roles of academy (universities)</li> <li>• Medical, IT, various</li> <li>• Middle rate of birth and low rate of death</li> </ul>

	Silicon Valley (U.S.)	Shenzhen (China)	Gothenburg(Sweden)
History	<ul style="list-style-type: none"> <li>• Before the 1960s, Military industry</li> <li>• In the 1970s–90s, semiconductor, PC, Software industries</li> <li>• In the 2000s, ICT, Bio, services industries</li> <li>• In the 2010s, AI, Bio and etc...</li> </ul>	<ul style="list-style-type: none"> <li>• In 1979, the central government designated the place as “Special Economic Zone”.</li> <li>• In the 1990s, accumulation of assemblers for the appliance and IT tool industry formed.</li> <li>• In the 2000, startups started appearing.</li> </ul>	<ul style="list-style-type: none"> <li>• In 2009, the government designated four universities as entrepreneur education universities.</li> </ul>
Main industry	<p style="text-align: center;"><b>Software, ICT</b> <b>Strong design and prototyping</b></p>	<p style="text-align: center;"><b>Medium scale (between prototyping and mass production) manufacturing and assembling.</b> Flexibility, speed, and low costs are competitive advantage. Supply chain, Digital economy, Social installation, science base</p>	<p style="text-align: center;">Various (IT, Cleantech, Medical tool, Bio...)</p>
Culture	Generous to failure, open, but network matters.	Free, open mind, business oriented. Different from typical Chinese culture that are afraid of losing prestige.	Low risk and not rapacious

	Silicon Valley (U.S.)	Shenzhen (China)	Gothenburg(Sweden)
Entrepreneurs	Abundance of entrepreneurs with various background	Main founders are Chinese returnees (called “Turtles”)	Swedish or those who came from other European countries
Human Resource	Abundance of excellence people come together naturally.	Chinese government encourage turtles to be back to China giving incentives.	Aluminum are hired by startups. Some of them are surrogate entrepreneurs.
Networks of entrepreneurs	World wide	The networks of Turtles are beyond national boundary.	Mainly in Europe
Labor market	High fluidity	High fluidity	High fluidity

	Silicon Valley (U.S.)	Shenzhen (China)	Gothenburg(Sweden)
Support from the government or local government	<p>The government and local governments play important roles.</p> <p>Federal government support startups through SBIR and other subsidies indirectly.</p> <p>Economic plans are made by each state, city, or chamber of commerce directly.</p>	<p>The government and local governments play important roles.</p> <p><b>The reform of the mindset of the people has been conducted since 2015, encouraging people to be innovative.</b></p> <p>Local government give incentives to excellent entrepreneurs (subsidies, housing fees and quick procedures for setting up companies.)</p>	<p>Subsidies from Swedish government and EU, soft loan, policy investment</p>
Feature of policy setting and implementation	<p><b>Entrepreneurs and their supporting industries change the regulations and laws through lobbying.</b></p>	<p><b>Industrial policy is not clear, leaving gray zone (avoidance). The government change its attitude depending how things go (called “Wild development”).</b></p>	

	Silicon Valley (U.S.)	Shenzhen (China)	Gothenburg(Sweden)
Finance	Abundance of money from investors(VC, Angel, CVC, etc.···)	Abundance of money from the government as well as VC, angel. Foreign VCs and accelerators have arrived and increased.	Unique policy finance
Role of large companies	Acquiring startups. CVC nurture startups	Collecting excellent human resources (Shenzhen lacks major university) ,acquiring startups, and nurturing startups via CVC.	Providing seeds technology, supplying money, setting up accelerators.
Role of universities	Producing entrepreneurs and startups through supplying excellent human resources, providing seed technologies and making networks.	<b>Universities have not been the main players.</b> Patent application by Shenzhen University is high. Satellite office of other excellent Chinese universities are located.	<b>Universities are main players..</b> Technology, entrepreneurial education are provided by the universities.

	<b>Silicon Valley (U.S.)</b>	<b>Shenzhen (China)</b>	<b>Gothenburg(Sweden)</b>
<b>Innovation</b>	Innovative companies are included and some of them produce something from nothing. On the other hand, companies providing similar services coexist and compete fiercely.	Fast process of commercialization.	Surrogate entrepreneurs are many.
<b>Target Markets</b>	Many companies are aiming to be a born global companies from the early stage.	China and South-East Asia are the main market for startups. Global companies are also increasing.	Market is mainly in Europe.
<b>Number of unicorns</b>	The first rank in the world.	The forth in China (China is the second in the world)	No unicorn.
<b>Exit strategy</b>	80% of startups are acquired.	M &A, MBO are major. IPO is decreasing.	Acquired by European companies or American companies.
<b>Birth/death rate and others</b>	High rates of birth and death rate High growth speed	High rates of birth and death rate High growth speed	Middle rate of birth and low rate of death Slow and medium growth

Thank you for your attention!