

# The Korean Startup Ecosystem:

Past,  
Present,  
and  
Future

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**START**



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## Foreword\_

Since the Korean War in the 1950s, the Korean economy has repeatedly overcome major crises—such as the oil shocks of the 1970s, the IMF-led financial crisis of the late 1990s, and the global financial crisis of the 2000s—through innovation, ultimately emerging more competitive each time. As a result, Korea has risen to become one of the world’s top ten economies and, in soft power domains such as K-Culture, now holds global influence as an advanced nation.

However, our country now faces a new era of profound transformation. Global supply chains are being reshaped amid intensifying U.S. - China tensions. The acceleration of AI and digital technologies, a declining and aging population, climate change, energy transition, and deepening social polarization are all exerting unprecedented pressures. These challenges pose serious threats—yet also open windows of opportunity. To become a G7 economy, Korea must once again pursue bold innovation.

This volume explores how the next phase of innovation required to navigate these turbulent times may be found within Korea’s startup ecosystem. The authors share a core concern: the traditional growth model—where large corporations mastered foreign technologies, then offered lower-cost, higher-quality, and faster products in proven markets—is no longer viable. Instead, we argue, it is time to find new growth frontiers in innovative startups and venture businesses.

Korea must now compete globally by developing differentiated, high-value-added products and services based on innovation. The creative and disruptive innovation that cannot be attempted within the bureaucratic

structures of large corporations must come from the dynamism of startups and ventures. The vitality of these firms is essential to cultivating new industries and markets. Furthermore, if the existing industrial ecosystems dominated by Korea's global conglomerates can synergize with a thriving startup ecosystem—through both competition and collaboration—the prospects for the national economy will be even brighter.

Korea's earlier generations achieved remarkable growth through grit and relentless innovation under extreme constraints. Since the 1997 Asian financial crisis, the Korean startup ecosystem has undergone two waves of boom and bust, emerging as one of the world's ten largest. In the meantime, Korea's education and R&D systems have significantly evolved, producing exceptional talent across sectors. Yet as growth slows, young people increasingly gravitate toward stable career paths, driven by anxiety about the future. This risk-averse social climate dampens the entrepreneurial spirit and clouds Korea's economic outlook.

What Korea now urgently needs is a startup ecosystem and societal culture that embraces failure, encourages entrepreneurial risk-taking, and rewards innovation. The risks of inaction and stagnation now outweigh the risks of failure through bold experimentation. Without daring innovation, the internal and external crises confronting Korean society cannot be resolved.

We hope more young Koreans will pursue startup opportunities with ideas and innovations that can reshape the world, and that they will adopt an entrepreneurial mindset that allows them to compete in the global market. Even more importantly, we hope Korea's startup ecosystem will be structured to help them persist through failure and rise again to new challenges. Our society must foster a culture that respects and supports entrepreneurs and startup leaders as national champions who will sustain Korea's prosperity in the face of demographic decline and aging.

This book was initiated as a research project by the Center for Innovation and Entrepreneurship at the KAIST College of Business. A team of experts with deep interest in the startup ecosystem collaborated over an extended period of research and discussion to write this book, which offers a comprehensive review of the past, present, and future of Korea's startup landscape.

The general introduction (Chapter 1: "The Korean Startup Ecosystem—Past, Present, and Future") and the concluding chapter (Chapter 10: "Challenges and Strategic Directions for the Sustainable Growth of Korea's Startup Ecosystem") were written by Professor Kim Youngbae, former Dean of the KAIST College of Business. The following chapters were authored by subject-matter experts:

- Chapter 2: Historical Development and Current Status of Korean Venture Firms - Professor Jeon Seongmin, Gachon University
- Chapter 3: The History and Current Status of Korean Venture Capital - Professor Paik Yongwook, KAIST College of Business
- Chapter 4: Co-evolution of Startups and Support Organizations - Professor Lee Byungheon, Kwangwoon University
- Chapter 5: The Role of Universities in the Startup Ecosystem - Professor Bae Zong-Tae, KAIST College of Business
- Chapter 6: The Startup Ecosystem and Conglomerates - Professor Kang Shinyung, Chungnam National University
- Chapter 7: Startup Policy in Korea - Professor Bae Tae Jun, Hanyang University
- Chapter 8: Regional Startup Ecosystems in Korea - Dr. Kim Sun-Woo, Science and Technology Policy Institute (STEPI)
- Chapter 9: Startup Culture in Korea - Professor Lee Choonwoo, University of Seoul

This book not only provides a panoramic view of the evolution of Korea's

startup ecosystem, but also offers deep dives into the roles and challenges faced by its key stakeholders—entrepreneurs, investors, and policymakers. It serves as a practical resource for those engaged in the development of Korea’s startup ecosystem. It will also be a valuable primer for university students and researchers seeking a deeper understanding of the Korean innovation landscape.

We hope this book will help a broad audience—from startup founders and investors to public officials—grasp the challenges ahead and act on the strategies presented here, ultimately translating insights into effective policy and entrepreneurial practice.

The completion of this publication was made possible by the contributions of many individuals and organizations. In particular, we express our gratitude to the members of the CIE Forum, who provided research funding through KAIST’s Center for Innovation and Entrepreneurship. We also thank the many expert contributors who wrote independent chapters with unique perspectives. The process of editing these into a cohesive volume required considerable time and effort. Special thanks go to Mr. Lee Soo-Young of Cheongram Publishing for his dedication and support in bringing this book to publication despite a challenging publishing environment.

December 8, 2024

On behalf of all authors,

Kim Youngbae, Bae Zong-Tae, Lee Byunghoon

# Contents\_

Part	<b>Chapter 1</b>
<b>1</b>	<b>The Korean Startup Ecosystem: Past, Present, and Future</b>
<b>Overview of Korea's Startup Ecosystem</b>	
	1. Why Focus on the Startup Ecosystem Now? ..... 4
	2. What Constitutes a Startup Ecosystem? ..... 7
	3. The Evolution of Korea's Startup Ecosystem ..... 15
	4. Current Landscape and Global Standing of Korea's Startup Ecosystem ..... 22
	5. Key Growth Drivers of Korea's Startup Ecosystem ..... 27
	6. Characteristics, Strengths, and Weaknesses of Korea's Startup Ecosystem ..... 29
	Annex. Detailed Measurement Indicators for the Startup and Venture Ecosystem ..... 33
Part	<b>Chapter 2</b>
<b>2</b>	<b>Historical Development and Current Status of Korean Venture Firms</b>
<b>Development and Current Status of Key Stakeholders in the Startup Ecosystem</b>	
	1. Changes in Korean Venture Firms Over Time ..... 39
	2. Localization Ventures ..... 42
	3. Internet Ventures ..... 47
	4. Mobile Ventures ..... 53
	5. Platforms · Bio Ventures ..... 55
	6. Obstacles and Challenges of Growing a Startup Company ..... 59
	<b>Chapter 3</b>
	<b>The History and Current Status of Korean Venture Capital</b>
	1. Overview of Venture Capital ..... 67

2. Overview of Corporate Venture Capital .....	75
3. Development Trajectory of the Korean Venture Capital Investment Market .....	76
4. Current Landscape of the Korean Venture Capital Market .....	85
5. Challenges and Future Directions for Venture Capital in Korea ..	90
6. Concluding Remarks .....	93

## Chapter 4

### Co-evolution of Startups and Support Organizations

1. Startups Don't Grow in Isolation .....	96
2. Enabling Survival and Growth: The Role of Support Organizations in the Ecosystem .....	98
3. Benchmark Cases: Successful Startup Support Organizations .....	101
4. Evolution of Support Organizations in Korea's Startup Ecosystem .....	109
5. The Future of Startup Support Organizations .....	116
6. Co-Evolution in the Startup Ecosystem: Startups and Their Enabling Infrastructure .....	120

## Chapter 5

### The Role of Universities in the Startup Ecosystem

1. The Changing Environment and Role of the University and Its Third Mission .....	126
2. The Orientation and Activities of Entrepreneurial Universities and University Entrepreneurship .....	129
3. University Entrepreneurship Education, Startup Support Activities, and Technology Commercialization .....	136
4. The Development and Current Status of University Entrepreneurship Ecosystems .....	142
5. The Impact of Universities on the Startup Ecosystem .....	145
6. Current Status of Korea's University Entrepreneurship Promotion Policy and Challenges for Universities .....	146
7. University Entrepreneurship and Strategies to Revitalize University-Based Startups .....	149
8. Concluding Remarks .....	151

## Chapter 6

### The Startup Ecosystem and Conglomerates

1. Strategic Objectives of Collaboration Between Conglomerates and Startups ..... 159
2. Corporate Venture Capital: A Mechanism for Conglomerates-Startup Collaboration ..... 164
3. In-House Ventures: Conglomerates as Incubating Organizations ..... 179
4. Challenges in Collaboration Between Conglomerates and Startups ..... 183
5. Success Factors in Conglomerate-Startup Collaboration ..... 187
6. The Role of Conglomerates in the Startup Ecosystem ..... 190

## Chapter 7

### Startup Policy in Korea

1. Evolution of Startup Policy in Korea ..... 199
2. Key Characteristics of Korea's Startup Policy ..... 221
3. Challenges in Korea's Startup Policy ..... 231

## Chapter 8

### Regional Startup Ecosystems in Korea

1. Why Regional Startup Ecosystems Matter? ..... 242
2. How are Regional Startup Ecosystems Be Measured? ..... 246
3. Which Cities Are Best for Startups? ..... 248
4. Is Korea's Regional Startup Ecosystem Growing? ..... 252
5. Strategies for Fostering Regional Startup Ecosystems ..... 266

## Chapter 9

### Startup Culture in Korea

1. The Evolution of Korea's Startup Ecosystem Culture ..... 276
2. Language and Symbols ..... 280
3. Identity, Membership, and Heroes ..... 288
4. Shared Values, Institutions, and Core Assumptions ..... 295
5. Ecosystem Leadership ..... 301
6. Future Challenges for Korea's Startup and Venture Ecosystem Culture ..... 303

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Part

**3**

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**Strategies  
for the  
Development  
of Korea's  
Startup  
Ecosystem**

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**Chapter 10**

**Challenges and Strategic Directions for the Sustainable  
Growth of Korea's Startup Ecosystem**

1. Future Strategies for Korea's Startup Ecosystem ..... 312
2. Cultural and Societal Transformation ..... 344

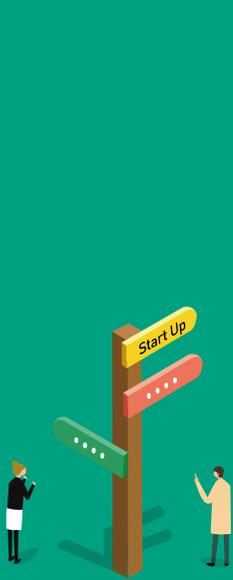
Part **1**

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# Overview of Korea's Startup Ecosystem

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## Chapter 1 The Korean Startup Ecosystem: Past, Present, and Future



## Chapter 1

# The Korean Startup Ecosystem: Past, Present, and Future

1. Why Focus on the Startup Ecosystem Now?
2. What Constitutes a Startup Ecosystem?
3. The Evolution of Korea's Startup Ecosystem
4. Current Landscape and Global Standing of Korea's Startup Ecosystem
5. Key Growth Drivers of Korea's Startup Ecosystem
6. Characteristics, Strengths, and Weaknesses of Korea's Startup Ecosystem

## 1 Why Focus on the Startup Ecosystem Now?

The world is rapidly entering the era of the Fourth Industrial Revolution – marked by hyperconnectivity, hyperintelligence, and hyperconvergence – driven by advances in digital and artificial intelligence (AI) technologies. In this new landscape, companies that lead open, platform-based innovation ecosystems have emerged as global industry leaders. The United States, for example, has successfully transitioned to a creative, innovation-driven economic structure. Big Tech firms such as MAAMA (Meta, Apple, Amazon, Microsoft, Alphabet) have spearheaded economic growth through disruptive innovations and transformative business models. China has followed a similar trajectory, with its own technology giants – BAT (Baidu, Alibaba, Tencent) – at the forefront of industrial innovation. Even traditional manufacturing firms like Haier, the world's leading home appliance company by market share, have restructured themselves into customer-centric, innovation-driven entrepreneurial ecosystems.<sup>1)</sup>

In contrast, South Korea's industrial structure remains heavily dominated by large conglomerates (*chaebols*) that led the country's economic takeoff in the 1970s and 1980s. These firms continue to hold commanding positions across most industries, and their economic weight has remained persistently high.<sup>2)</sup> Since the beginning of the 21st century, only a handful of companies – such as *Naver*, *Kakao*, *Coupang*, and *Celltrion* – have managed to scale into the ranks of large enterprises. This scarcity of upward mobility suggests stagnation within Korea's corporate ecosystem.<sup>3)</sup>

1) Frynas, J. G., Mall, M. and Mellahi K. (2018). Management Innovation Made in China: Haier's Rendanheyi, *California Management Review*, 61(1), 71-93.

2) As of 2020, 71 conglomerates accounted for 84% of nominal GDP, with four groups - Samsung, Hyundai, SK, and LG - accounting for 37% ([www.yna.co.kr/view/AKR20200610168600003](http://www.yna.co.kr/view/AKR20200610168600003)).

3) [Korea, a country that can't grow big companies] ① "Growth is scary" ... 'Peter Pan syn-

More recently, Korea's demographic decline has compounded these challenges, exposing the limits of a growth model predicated on fast-following and large-firm dominance. Professor Kim Sejik (2021)<sup>4)</sup> argues that Korea's long-term economic growth rate is declining by approximately 1 percentage point every five years. To sustain national economic momentum, he emphasizes the necessity of increasing the share of startups and venture firms—entities rooted in original innovation and capable of commercialization.

Recognizing the strategic importance of the startup ecosystem, the Korean government announced its *Plan for Building an Innovation Startup Ecosystem* in July 2017 and established a master fund exceeding KRW 1 trillion to support its implementation. In April 2020, it introduced further measures to strengthen support for startups and venture companies. These policy efforts reflect a growing consensus: fostering a dynamic startup ecosystem represents one of the most realistic and effective solutions to Korea's structural economic challenges, particularly low growth and increasing inequality. Evidence supports this shift. As of 2023, revenue generated by venture firms founded on innovation ranks second only to Samsung Group, and their total employment surpasses that of Korea's four major conglomerates combined.

Korea's traditional large corporations, which grew during the industrialization era, were forged in a competitive environment that emphasized cost-effective replication of technologies and products developed in advanced economies. As a result, they built organizational cultures centered on efficiency and execution. In contrast, the emerging industrial landscape of the Fourth Industrial Revolution favors enterprises—startups and venture firms—that are agile, resilient, and unafraid of failure. These firms thrive by pivoting quickly and commercializing creative, innovative technologies and

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drome' of wanting an eternal medium term (daum.net)

<sup>4)</sup> Kim, Sejik (2021). Imitation and creation. Bright

business models.

Despite this paradigm shift, Korea still lags behind its global peers in terms of startup investment relative to GDP. As of 2018, startup investment accounted for just 0.28% of Korea's GDP, compared to 0.48% in the United States and 0.84% in China.<sup>5)</sup> To ensure sustainable economic growth, Korea must dramatically accelerate the development of its startup ecosystem, which still constitutes a small portion of the broader economy. Moreover, a strategic convergence is needed: leveraging the global scale and capabilities of large conglomerates while harnessing the creativity and speed of startups. By combining their complementary strengths, Korea can create new engines of growth.

Admittedly, integrating two sectors with such distinct histories, organizational cultures, and management philosophies is no easy task. Yet, for both large corporations and startups, this is a challenge that cannot be avoided—one that is essential not only for their own survival and growth but also for the future of Korea's industrial competitiveness.

To this end, this volume begins by examining the foundational question: *What is a startup ecosystem, and why does it matter?* It then traces the evolution of Korea's ecosystem over the past four decades, evaluates its current structure and characteristics, and analyzes the challenges that must be addressed to position startups as central drivers of national economic growth. Finally, it explores actionable strategies for overcoming these barriers and building a more dynamic and globally competitive innovation ecosystem.

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<sup>5)</sup> IIT Trade Focus. A Comparison of Startup Investment Ecosystems in Korea, the US, and China. Korea International Trade Association, No. 19, 2019. However, it has increased from 0.13% up to 2016, and in 2020, it grew to the 4th place after the US, Israel, and China (last year's venture investment of KRW 4.277 trillion, the highest ever... 4th in the world as a percentage of GDP - Trade News (kita.net)).

## 2 What Constitutes a Startup Ecosystem?

The “startup ecosystem” is also referred to as the entrepreneurial ecosystem, innovation ecosystem, venture ecosystem, or startup - venture ecosystem.<sup>6)</sup> While each term carries slightly different connotations<sup>7)</sup> and nuances depending on context, this study uses them interchangeably unless otherwise specified. Isenberg<sup>8)</sup> identifies the key components of a startup ecosystem as capital, culture, support infrastructure, human resources, markets, and government policy. In contrast, Budden and Murray<sup>9)</sup> approach it from the perspective of stakeholders, identifying entrepreneurs, venture capital, corporations, government, and universities as core players and emphasizing their interactions.

The concept of a business ecosystem, originally derived from biology, assumes that firms continuously evolve through dynamic interactions with their surrounding environment. In this vein, the Startup Genome model<sup>10)</sup> adopts a dynamic perspective, reflecting the evolutionary development of ecosystems. The driving forces within a startup ecosystem are the interconnectedness and collaborative interactions amongst its key players, and its ability to adapt and evolve in response to changes in the external environ-

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6) A startup, entrepreneurship, or entrepreneurship ecosystem focuses on the creation of new companies, while an innovation or venture ecosystem includes not only startups but also growth-stage ventures, with a focus on innovation. While startups include all startups in general, this study focuses on high-tech or innovation-based startups, including small to mid-sized companies with technology or innovation-based business models, even if they are not designated as ventures by the government.

7) In the 1990s, compared to SMEs, ventures were perceived positively as representing an innovative and rational approach to management, but since the 2000s, after several moral hazard events and a decline in trust in ventures, the term startup has been preferred (see Chapter 9, Culture of Entrepreneurship).

8) Isenberg (2011)

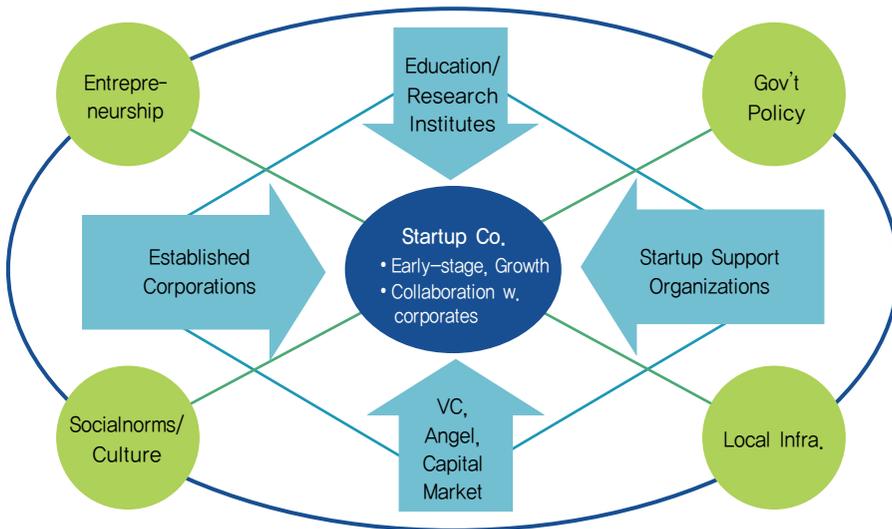
9) Budden & Murray (2019)

10) Startup Genome

ment as an open system.

This book integrates all three perspectives—component-based, stakeholder-oriented, and dynamic evolution—to examine the structure and interrelationships within the startup ecosystem. As illustrated in Figure 1-1, the ecosystem centers around early-stage startups and innovation-driven small and medium-sized enterprises (SMEs), and includes: incubators and accelerators that provide support; professional service providers such as consulting, legal, and accounting firms; financial institutions such as venture capital (VC) and angel funds; and research institutions and universities that act as host organizations. It also encompasses collaborative networks with established large or mid-sized corporations that serve as partners in open innovation and business development. Additional influencing factors include government policies, the physical and social infrastructure of each region, and the sociocultural environment surrounding entrepreneurship and innovation in Korean society. This framework assumes that not only the scale of each stakeholder group and the nature of each factor, but also the pat-

**Figure 1-1 Startup Ecosystem Framework**



terns of their relationships and interactions, continue to evolve over time.

Another important dimension is the unit of analysis or scope of a startup ecosystem. Depending on the researcher or institution, the ecosystem may be defined at the national or city level, or based on specific regions such as Silicon Valley or Tehran Valley.<sup>11)</sup> Beyond geographic units, ecosystems can also be defined by industry clusters such as biotechnology or ICT. This book primarily examines Korea's national-level startup ecosystem but also explores region-specific dynamics, particularly in Daejeon (including Daedeok Innopolis) and Pohang, as part of broader regional revitalization efforts (see Chapter 8). The startup ecosystem framework remains useful across various units of analysis for mapping relationships among core stakeholders.

This study defines the startup ecosystem as a “collaborative network centered around innovation-driven startups, supported by incubators, accelerators, consulting and legal/accounting firms, financial institutions such as VCs and angel investors, universities and research institutes, government and public agencies, and existing companies serving as open innovation or business development partners.” It also includes relevant government policies, regional infrastructure, and sociocultural attitudes toward entrepreneurship as direct and indirect components of the ecosystem.

At the heart of the startup ecosystem are startups and venture firms that create new value through innovation. While legal definitions often distinguish between “startups” and “venture firms” for policy or certification purposes, this book does not adhere strictly to those distinctions. Instead, it includes all innovation-driven SMEs that create new economic or social value through novel products, services, business models, or management innovations—regardless of whether they are within the first seven years of founding or have obtained official venture certifications. Chapter 2 explores

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<sup>11)</sup> Jeon, Sungmin and Kim, Sangsoo (2023). *The Tehran Valley Story: From Venture to Startup*. Startup Alliance.

these entrepreneurial actors in more detail.

Key supporting players in the ecosystem—those that provide resources, services, or partnerships necessary for startup growth—include financial institutions such as VCs and angel investors; support institutions such as incubators and accelerators; academic and research institutions that foster entrepreneurship; and large or mid-sized firms that engage in open innovation or co-develop new businesses with startups. These four core stakeholder groups form the foundation of collaboration. The vibrancy of the ecosystem depends heavily on how actively and productively startups and these key stakeholders interact. As such, both the quantitative and qualitative development of these groups, along with the strength of their networks and collaborative mechanisms, are critical.

Capital is the most essential input for startup growth. Sources range from individual and angel investors who provide seed funding to more institutional actors such as VCs, traditional financial institutions, pension funds, and corporate venture capital (CVC) arms of established companies. Particularly important are professional VC firms—including Changtusa (Small and Medium Enterprise Start-up Investment Companies) and Singisa (New Technology Business Finance Companies)—which provide not only capital but also management and technical guidance to early-stage, high-potential firms. These VCs play a vital role as suppliers of risk capital that fuels the lifeblood of the ecosystem. Chapter 3 focuses on these risk capital providers.

Beyond funding, startups also require a wide range of managerial services and tangible and intangible resources. These include: incubators offering early-stage physical space and infrastructure; professional service firms (e.g., accounting, tax, legal, and consulting); and accelerators that help validate business models, secure follow-on investment, support market entry, and provide mentoring and coaching. While many of these services are publicly funded, private providers have grown significantly in both scale and specialization in

recent years. Chapter 4 covers this expanding support infrastructure.

Universities and research institutes play a critical role in educating and producing entrepreneurs. While their traditional focus has been on education and R&D, many are now actively engaged in commercializing research through entrepreneurship education and startup incubation. Korea's academic and research institutions have achieved global parity in many technology domains, and increasingly serve as the birthplace of cutting-edge startups. Chapter 5 examines their evolving role in the ecosystem.

Established corporations and mid-sized enterprises are another key group. They can provide startups with access to markets, capital, managerial expertise, and talent. In return, they benefit from new business development opportunities and innovative collaboration. Many large corporations have adopted open innovation strategies, launching internal venture programs, creating CVC arms, and operating incubators and accelerators to foster partnerships with startups. Chapter 6 explores their role in detail.

The dynamism of the startup ecosystem ultimately depends on the vibrancy of interactions among these key players. Several environmental factors influence these interactions, including government policy, regional infrastructure, and broader sociocultural attitudes toward entrepreneurship.

Government policy includes both direct support initiatives (e.g., innovation ecosystem plans, master funds, startup and venture firm promotion measures) and indirect policies such as those supporting national strategic technologies, advanced industries, carbon neutrality, and demographic resilience. This study focuses primarily on policies that directly affect the startup ecosystem, which are examined in Chapter 7.

Regional infrastructure is another crucial dimension. While some view ecosystems at the national level, collaboration typically concentrates in specific locales<sup>12)</sup>—Silicon Valley being the prototypical example. In Korea,

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<sup>12)</sup> Startup Genome analyzes and ranks the competitiveness of startup ecosystems at the

the Seoul metropolitan area dominates economic activity and startup formation. This book analyzes the causes of such concentration and presents strategies to strengthen regional ecosystems as a pathway to balanced national development. These regional strategies are explored in Chapter 8.

Chapter 9 turns to Korea's cultural and social attitudes toward entrepreneurship. Ultimately, the success of startups and the evolution of their support networks depend heavily on public perception and societal support. Societal attitudes toward employment vs. entrepreneurship, job stability vs. risk-taking, and failure vs. creative learning play a defining role in determining whether the startup ecosystem can truly flourish. At the same time, the performance of startups can influence social perceptions in return. In fact, the coevolution of Korea's startup ecosystem and its entrepreneurial culture is evident in its recent development.

Finally, Chapter 10 integrates the insights from earlier chapters to diagnose core challenges, identify root causes, and propose strategic directions for Korea's future startup ecosystem. It focuses on synergies between startups and large firms, policy alignment, and strategic role differentiation among ecosystem stakeholders to accelerate national innovation and growth.

Before addressing these strategies, we begin with a brief review of how Korea's startup ecosystem has evolved over the past four decades.

### Silicon Valley Startup Ecosystem

One of the world's first and best startup ecosystems is Silicon Valley in California, USA. While many countries, including Korea, have recently been trying to create an artificial startup ecosystem by imitating Silicon Valley, the Silicon Valley startup ecosystem was formed naturally and has been constantly evolving throughout history.

Geographically, the region encompasses the Santa Clara Valley, south of San Francisco

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city level rather than the country level.

Bay, and includes San Jose, Santa

It includes cities such as Clara, Palo Alto, Sunnyvale, Mountain View, and Cupertino. Silicon Valley became known as Silicon Valley in the 1950s when silicon-based semiconductors were developed in once-orchard country, spawning numerous startups that grew into global companies. As of 2021, more than 30 of the Fortune 1,000 companies are headquartered here, and thousands of startups are active.<sup>13)</sup>

The emergence of Silicon Valley as a mecca for high-tech startups is largely attributed to Stanford University, which led the industrialization of the West Coast, which was inferior to the East Coast. In particular, Professor Fredrick Terman,<sup>14)</sup> dean of the School of Engineering since 1946, played a leading role in establishing the Stanford Industrial Park (the predecessor of the current Stanford Research Park) in 1951, leasing land to high-tech companies and fostering companies such as HP, Varian Associate, Eastman Kodak, GE, and Lockheed. He became known as the father of Silicon Valley when he gave \$538 to engineering graduates Bill Hewlett and David Packard in 1938 to start their own company, which grew to become HP.

Another father of Silicon Valley, Dr. William Shockley, founded the Shockley Semiconductor Laboratory in Mountain View in 1956, establishing Silicon Valley as the cradle of semiconductors. But Shockley, a brilliant researcher who won a Nobel Prize in physics, was a poor manager, and eight researchers rebelled against his



<sup>13)</sup> Silicon Valley - Wikipedia

<sup>14)</sup> Professor Terman also has strong ties to Korea. He was instrumental in the founding of the Korea Institute of Science and Technology (KIST) and the establishment of the Korea Advanced Institute of Science and Technology (KAIST) in the 1960s, which KAIST commemorates with the opening of Terman Hall on its campus.

leadership(the traitorous eight)<sup>15)</sup> He founded Fairchild Semiconductor, which developed the first commercial IC semiconductors, and two of its founders, R. Noyce and G. Moore, would later found Intel, which would become the world's leading manufacturer of microprocessor semiconductors. In the 1970s, the ARPANET technology, the predecessor of the Internet, was developed here, and venture capital firms such as Kleiner Perkins Caufield & Byers and Sequoia, as well as Silicon Valley Bank, were established around Redhill Road, leading to a boom in startups in the computer, network, and software fields. Representative companies include Apple, Microsoft, Cisco, Oracle, 3Com, Adobe, etc. since the 1970s, and Google, Facebook (now Meta), Twitter (now X), eBay, PayPal, etc. in the 1990s, when the Internet began to spread in earnest. However, around 2000, the dot-com bubble burst and the industry fell into a deep hole.

However, since then, new startups such as Tesla, LinkedIn, YouTube, and the so-called PayPal Mafia have led the way in Silicon Valley's innovation, and new startups have been created not only in the IT sector, but also in the bio and energy sectors. More recently, startups such as OpenAI are leading the world in artificial intelligence, and Silicon Valley is nowhome to the world's largest number of unicorns. Silicon Valley accounts for about 40% of venture capital investment in the U.S., the most patents filed, and the highest percentage of millionaires.

Silicon Valley has become the most favorable ecosystem for startups in the high-tech sector due to the influx of talented people from prestigious universities such as Stanford and Berkeley, deep pockets of venture capitalists, world-class accelerators such as Y Combinator, and professional support organizations that provide legal, tax, and management advice, as well as many opportunities for open networking, a social environment that is tolerant of failure, and a favorable institutional environment such as taxes. As a result, talented people and large amounts of money from all over the world, including India and China, have been attracted to Silicon Valley, creating a virtuous cycle for the development of the ecosystem. In a study by Saxenian<sup>16)</sup> comparing Silicon Valley to Boston's Route 128 area, another U.S. high-tech hub with Harvard University and MIT, the advantage of

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**15)** In addition to founding startups such as Intel, the eight have also helped build Silicon Valley's startup ecosystem by founding venture capital firms such as Kleiner Perkins Caufield & Byers, working with industry and academia as professors at Stanford University, or working as startup consultants.

**16)** AnnaLee Saxenian (1996). *Regional Advantage: Culture and Competition in Silicon Valley and Route 128*. Harvard University Press.

Silicon Valley is its culture of open social and economic networking, which is more responsive to market changes than ecosystem elements such as universities, research institutes, venture capitalists, and legal and consulting firms.

However, there is a dark side to the city, which is known for having some of the highest housing costs in the U.S., as well as traffic congestion and high cost of living. This has led some high-tech companies, such as Tesla, to move their headquarters elsewhere. New York's Silicon Valley, spurred on by the success of New York's Silicon Valley, or San Diego and Austin, Texas, with their focus on the biomedical sector, are emerging as alternative startup ecosystems.

Source: [https://en.wikipedia.org/wiki/Silicon\\_Valley](https://en.wikipedia.org/wiki/Silicon_Valley)

### 3 The Evolution of Korea's Startup Ecosystem

Korea's startup ecosystem can be traced back to the early 1980s. Prior to that time, most SMEs in Korea, which lacked their own technological capabilities, were mainly outsourcing partners to reduce costs or localize parts, materials, and equipment that large companies imported from abroad. However, after the 1970s, pioneers who studied abroad or learned advanced technologies at domestic science and technology universities, including KAIST, began to start new types of ventures such as Sambo Computer, Qnix, and Medison based on innovation as the computer market centered on PCs opened in the 1980s.<sup>17)</sup>

In the mid-1990s, the first generation of venture startups followed their lead, laying the initial foundation for the Venture Business Association and the KOSDAQ market, and in 1997, the IMF foreign exchange crisis led to

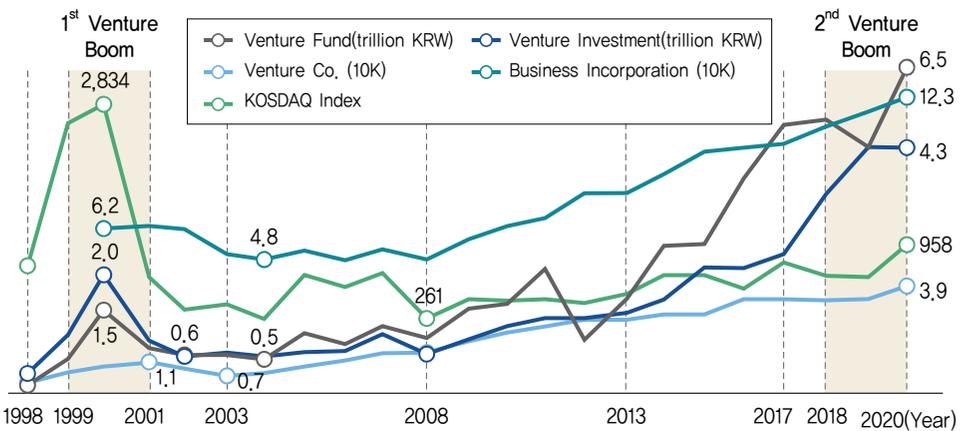
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<sup>17)</sup> Early studies of venture firms referred to them as venture firms (Lee, Jin-Joo. *Venture Firms, Venture Capital, and Technology Entrepreneurs*. Center for Economic Research, Korean Chamber of Commerce and Industry, 1984).

an explosive growth of venture companies as new economic players. However, the dot-com bubble burst internationally in 2001, and the short-lived and hyped venture boom in Korea had serious side effects, leading to a venture dark age for more than a decade. Then, in the mid-2010s, with the advent of the mobile economy and the Fourth Industrial Revolution, Korea experienced a second venture boom as new platform-based startups grew into unicorns.

A quick chronological summary of this growth is shown in [Figure 1-2]. Following the first venture boom around 2000, we are in the midst of the second venture boom in 2018, 20 years later. Let's take a closer look at the development of our startup ecosystem over the past 40 years of quantitative and qualitative growth.

**Figure 1-2 Trends in the Growth Process and Indicators of the Startup Ecosystem**



Source: Ministry of SMEs and Startups. Analysis of Changes in the Korean Startup Ecosystem, April 26, 2021.

### Venture Birth (1980–1990)

The birth of venture companies as innovation-based startups can be generally traced back to the 1980s. Starting with Dr. Yong-tae Lee's founding

of Sambo Computer in 1980 after returning from the U.S., KAIST professor Lee Beom-chun and Dr. Min-hwa Lee founded Qnix Computer and Medicine, respectively, while Song Ho-geun, Lee Chan-jin, and Byun Dae-kyu, all from Seoul National University's College of Engineering, founded Yang Ji Won Tools, Hangeul Computer, and Humax, respectively. In addition, first-generation ventures were dominated by CEO Cho Hyun-jung founding Bit Computer and Chairman Jung Moon-sul founding Mirae Industry.

The Korea Technology Advancement Corporation (KTAC), which can be said to be the prototype of venture capital in Korea, was established in 1974 to commercialize the technologies of KIST. However, it can be said that venture capital in Korea began in earnest in 1986 with the enactment of the Act on Financing New Technology Businesses to enable private startup investment and the subsequent establishment of the Korea Technology Investment Corporation (KTIC) (now SBI Investment). In other words, this was the first time in our history that independent startups based on new technologies were born at universities and research institutes, and that venture capital investment could be provided to them in addition to existing financial institutions.

### **The First Venture Boom (1991–2000)**

The 1990s saw a boom in the start-up of new technology-based ventures such as Pantech, Sarom Technology, Ahn Cheol-soo Research Center, and Joosung Engineering. Especially in Korea, where the Internet was rapidly expanded in 1994, startups were established not only in hardware such as electronic components and equipment, but also in new software business areas such as online games and Internet communication.

As a result, a full-fledged startup ecosystem began to develop. Pioneers who experienced the harsh business environment as first-generation venture

company founders joined forces to create the Venture Business Association in 1995 and convinced the government to open the KOSDAQ market in 1996. In the same year, the Small and Medium Business Administration was established, and in 1997, the Venture Business Special Act was introduced. Through this, support policies such as allowing investment in venture companies, establishing the KoreaVenture Investment Association, providing preferential credit guarantees to venture companies and companies specializing in new technology, establishing companies specializing in technology startups, and reducing taxes were implemented, and hundreds of billions of won in venture investment funds were raised annually. In addition, in 1993, the first university incubator for startup incubation was established at KAIST, and since 1998, the number of incubators and technoparks has increased significantly under the government's initiative.

Especially after the IMF foreign exchange crisis in late 1997, venture companies experienced explosive growth thanks to the government's active support. The government, which needed a new growth engine after the collapse of the chaebol companies that were trying to expand too much, introduced the venture company certification system in 1998 and provided intensive support to certified companies, including funding and tax benefits. In addition, as successful ventures and their founders attracted media attention, market funds and talent flocked to the venture ecosystem, creating an explosive virtuous cycle of venture startups. From around 500 venture companies in 1995 to more than 11,000 in 2001, the KOSDAQ index, which started at 100 in 1996, experienced explosive growth, rising to a level of more than 250 in 2000.<sup>18)</sup>

The success of successful lab seniors inspired many graduate students in science and engineering to start their own labs, and this led to the rapid

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<sup>18)</sup> The KOSPI, which started at 100 in 1996, dropped sharply after 2000 and increased tenfold to 1,000 in 2004. Therefore, Figure 1-2 shows the KOSPI based on 1,000.

growth of venture capital firms that invest venture capital in start-up and growth stages, as well as early-stage support organizations that provide tax and legal services.<sup>19)</sup> At the time, Tehran Valley even boomed with high-end restaurants and bars for venture capitalists.

### Venture bubble and downturn (2001–2010)

However, the collapse of the NASDAQ index in 2001 due to the bursting of the U.S. dot-com bubble threw cold water on Korea's venture business boom. Moreover, the KOSDAQ, which grew rapidly in a short period of time, collapsed rapidly due to various moral hazards caused by companies that were 'just ventures' and the so-called four illegal gate cases.<sup>20)</sup> As a result, the trust in venture companies has also fallen to the ground, and the term venture has become negatively perceived.

The period from 2001 to 2010 can be characterized as a period of venture downturn and at the same time, a period of healthy startup ecosystem. In addition to the self-correction efforts of the venture business community, the government announced the Venture Business Stabilization Plan in 2002 and the Venture Business M&A Revitalization Plan in 2003. In 2005, a parent fund was formed and Korea Venture Investment was established as the lead organization, and the Venture Special Act was extended. In addition, efforts were made by the government and the venture industry to domesticate the venture ecosystem, such as the Venture Capital Advancement Plan, but it was not activated quickly enough. In the end, this period can be said to be a cold winter for the startup ecosystem, but it was also a time when many problems in the ecosystem were solved.

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<sup>19)</sup> Jeon, Sungmin and Kim, Sangsoon (2023). The Tehran Valley Story. Startup Alliance.

<sup>20)</sup> More details will be introduced in Chapter 2 on the historical development and current status of Korean venture firms.

## Building a Venture Ecosystem and the Second Venture Boom (2011 –to present)

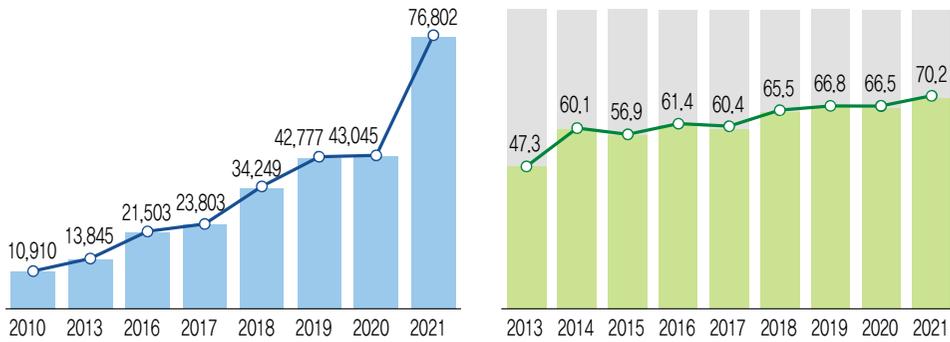
Since then, the Changnyeong Entrepreneurship Academy was established in 2011 and the Creative Economy Innovation Centers were expanded to cities and provinces in 2014 to revitalize the startup ecosystem. In 2013, the TIPS (Tech Incubator Program for Startup Korea) program, which combines private investment and government funding, was introduced, and a plan for a virtuous cycle of venture capital funding and a comprehensive plan for re-challenging SMEs was announced. In 2017, the Small and Medium Business Administration was upgraded to the Ministry of SMEs and Startups and plans to create a new innovative startup ecosystem were announced. In addition, the digital revolution represented by the Fourth Industrial Revolution and the emergence of platform businesses have revitalized the creation of startups with new business models around the world, and companies that have grown into unicorns have attracted attention. As a result, the first venture boom in the late 1990s was followed by the second venture boom in Korea since the mid-2010s, and new startups based on O2O (Online to Offline) or platforms were activated, and the scale of venture investment increased rapidly. As shown in [Figure 1-3], the size of venture funds in Korea grew more than seven times from KRW 1 trillion in 2010 to KRW 7.7 trillion in 2021,<sup>21)</sup> and the proportion of private investment increased from 47% in 2013 to 70% in 2021.

This was largely due to the government's active venture investment and support policies, such as the Korea Fund of Funds (*motae-fund*) introduced in 2005 and the TIPS program launched in 2013. In addition, private venture capitalists expanded their investment scale and developed venture incubation support systems, including accelerators with new support capabilities such

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<sup>21)</sup> Statistics on the size of venture investment in Korea vary greatly depending on the data collection organization. In this article, we cite the statistics released by the government.

**Figure 1-3 Trends in the Scale of Venture Investment and the Proportion of Private Investment in Korea**  
(Unit: 100 million KRW)



Source: Joint Ministries. Measures to Foster a Dynamic Venture Investment Ecosystem, November 4, 2022.

as Primer, established in 2010, and Meshup Angels, established in 2013, and incubators operated by universities and local governments, which have been continuously expanding since the 1990s. The government, VCs, universities, and support organizations such as accelerators and incubators have evolved and developed through learning from the past venture boom and bust cycles, and new VCs and investment experts such as Altos Ventures with experience in overseas VCs and startup ecosystems have joined the venture ecosystem, resulting in significant growth in both quantity and quality.

However, the war in Ukraine in 2022 and the escalating hegemonic rivalry between the US and China have led to rapid changes in global supply chains, higher inflation, and rising global interest rates, which have led to a rapid contraction in venture capital investment. This may also be an opportunity to strengthen the startup ecosystem in the long run by screening the rapidly increasing number of startups and ventures in the short term.

## 4 Current Landscape and Global Standing of Korea's Startup Ecosystem

[Figure 1-4] summarizes the changes and status of Korea's startup ecosystem since 2000. Compared to the first venture boom in 2000, venture investment increased from KRW 2 trillion to KRW 4.3 trillion in 2020, the number of corporate startups increased from 6.1 to 12.3 thousand, and the number of media articles almost doubled from 5.1 to 8.9 thousand. Compared to 2016, the proportion of technology-based startups, the number of unicorns, and the global startup ecosystem ranking have also increased rapidly. Of course, these achievements are largely due to the government's consistent policies to revitalize the startup ecosystem, but they are also made possible by the innovation and efforts of entrepreneurs armed with new business models and entrepreneurship, as well as the startup ecosystem actors who have experienced and learned from the rise and fall of ventures over the past 40 years.

In addition, the number of venture companies, which are the center of Korea's startup ecosystem, was 37,686 in 2022, of which 14 were unicorns,<sup>22)</sup> ranking among the top 10 in the world.<sup>23)</sup> The scale of venture companies employs 835,000 people, exceeding the employment scale of the four major conglomerates by more than 720,000 people, and the total sales amounted to more than 223 trillion won, second only to Samsung Group.<sup>24)</sup>

Meanwhile, new venture investment was the second highest on record, although it fell from KRW 7.682 trillion in 2021 to KRW 6.764 trillion in 2022 due to rapid interest rate hikes driven by global inflation.<sup>25)</sup> In the end,

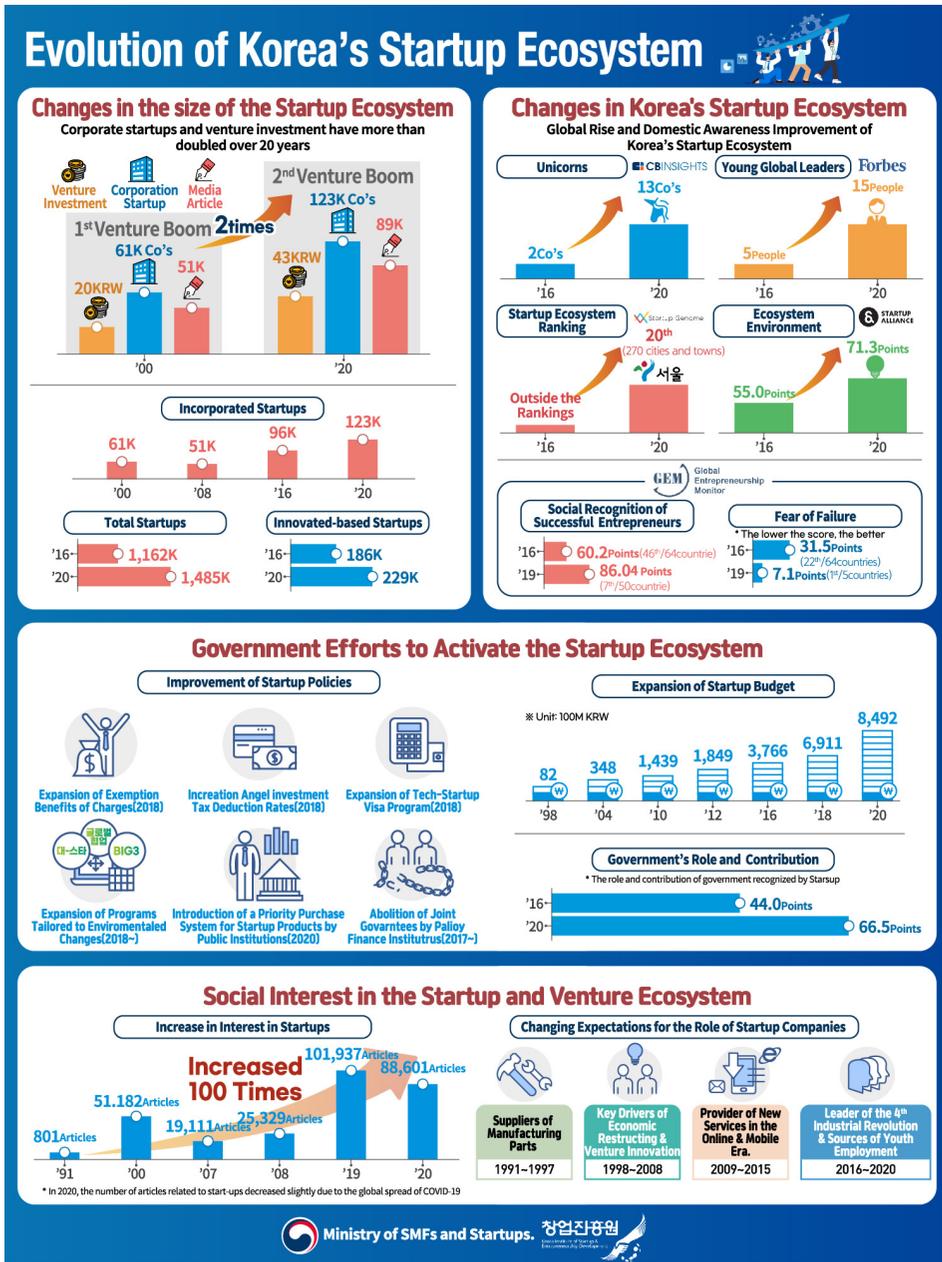
<sup>22)</sup> Korea's unicorn companies '14 vs 22' [FACT IN News]. The Korea Times (segye.com)

<sup>23)</sup> <https://worldpopulationreview.com/country-rankings/unicorns-by-country>

<sup>24)</sup> Venture firms totaled KRW 223 trillion in sales... 2nd largest in Korea after Samsung - Policy News. Korea Policy Briefing (korea.kr)

<sup>25)</sup> Venture Investment Trends for 2022 - Press Briefing Room, Korea Policy Briefing (korea.kr)

Figure 1-4 Evolution of Korea's Startup Ecosystem Status



Source: Korea Startup Promotion Agency. Changes in Korea's startup ecosystem. Infographic, 2021.4.26.

venture investment shrank by half in 2023, but investment in early-stage startups increased.

But how competitive is our startup ecosystem internationally? As Silicon Valley in California has emerged as an exemplary startup ecosystem, other cities in the United States and many countries such as China, the United Kingdom, France, Israel, Singapore, etc. have been benchmarking and expanding their startup ecosystems. In response, efforts are being made to develop indices to measure startup ecosystem activity and performance for each country or city.<sup>26)</sup> The indices generally include the quantity and quality of entrepreneurial activity, startup size and growth rate, funding and investment, accelerators, incubators, and support infrastructure, technology and knowledge levels, education and workforce, entrepreneurship, socio-culture, government support policies, and internationalization in terms of funding, workforce, and business.<sup>27)</sup>

In Korea, private organizations such as Startup Korea, Startup Alliance, and Venture Square, as well as the Ministry of SMEs and Startups and the Institute for Science and Technology Policy, have developed and published startup ecosystem measurement indexes.<sup>28)</sup>

[Table 1-1] shows how much Korea's startup ecosystem has developed over the years, based on the Startup Venture Ecosystem Index developed by Sunwoo Kim and others, which consists of companies, investments, and the

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<sup>26)</sup> Several organizations assess the performance and capabilities of local startup ecosystems, including the Kauffman Foundation's Entrepreneurial ecosystem & Entrepreneurship Index, Bloomberg's US Startups Barometer, the OECD's Entrepreneurship indicator, the UK's Tech Nation Report, Startup Genome's Global Startup Ecosystem Report (GSER), and the Global Entrepreneurship Research Association's Global Entrepreneurship Monitor (GEM), all of which measure and publish metrics at different levels and geographic scales.

<sup>27)</sup> Younghwan Kim, et al. An International Comparative Study on the Competitiveness of Korea's Entrepreneurship Ecosystem. Korea Institute for Science and Technology Policy, 2021.4.21.

<sup>28)</sup> For more metrics on the Entrepreneurial Startup Ecosystem Index, see [Exhibit 1].

government. The index has grown almost threefold from 100 in 2010 to 284.7 in 2021. The corporate index, which is represented by the size of venture companies, the number of startups, and venture companies with sales of KRW 100 billion, increased to 136.8, while the government and investment indexes increased to 359.2 and 395.3, respectively, indicating that the ecosystem has grown rapidly due to active government support and an increase in the scale of venture investment.

[Table 1-2] shows the change in the status of Korea's startup ecosystem from a global perspective. According to the Global Startup Ecosystem Report (GSER) released by Startup Genome, which measures startup ecosystems at the city level, Seoul's startup ecosystem value, which was not even in the top 30 in the world until 2019, rose to 16th place in 2021, then to 10th place in 2022, and then to 12th place in 2023.<sup>29)</sup> The reason for the world's top 10 ecosystems is that the ecosystem's activity, including venture investment volume and activity, knowledge accumulation such as R&D and patents, talent and experience, and startup performance have increased.

**Table 1-1** Korean Startup Ecosystem Index (2010–2021)

Category (Weight)	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Composite Index(10)	100.0	106.8	105.6	113.7	128.4	151.3	165.7	182.1	205.5	215.8	262.5	319.6
Enterprise Index(4)	100.0	108.4	114.1	115.0	120.1	125.1	130.3	134.8	142.6	147.8	157.4	163.7
Investment Index(4)	100.0	108.3	94.8	102.5	130.0	164.3	184.5	210.4	257.7	271.5	346.5	467.8
Government Index(2)	100.0	100.7	110.1	133.5	141.6	177.9	198.8	219.9	227.0	240.3	304.7	334.9

Source: Ministry of SMEs and Startups. 2022.5.24.

<sup>29)</sup> <https://startupgenome.com/report/gser2023>

**Table 1-2 | International Standing of Korea's Startup Ecosystem (2019-2023)**

Category	2019	2020	2021	2022	2023	Evaluation Organization
Global Startup Ecosystem Ranking	Unranked	20th	16th	10th	12th	Startup Genome
Global Innovation Index	11th	10th	5th	6th	10th	World Intellectual Property Organization(WIPO)
National Entrepreneurship Context Index(NECI)	15th	9th	7th	9th	8th	Global Entrepreneurship Monitor(GEM)

Source: Choi Hyunhee (2022), updated from p.18.

On the other hand, the World Intellectual Property Organization's (WIPO) Global Innovation Index,<sup>30)</sup> which measures the competitiveness of startup ecosystems at the country level, rose from 11th place in 2019 to 6th place in 2021, but fell to 10th place in 2023. The Global Entrepreneurship Monitor's (GEM) Entrepreneurship Index<sup>31)</sup> increased from 15th in the world in 2019 to 8th out of 51 countries in 2023. The overall startup ecosystem index indicates that Korea is currently ranked around the 10th most competitive in the world.

**Table 1-3 | Number of Unicorn Companies and Market Capitalization Ranking**

Country	No. of Unicorns	Market Capitalization of Unicorn Companies (US\$1 billion)	Country	No. of Unicorns	Market Capitalization of Unicorn Companies (US\$1 billion)
United States	653	2,049	France	25	60
China	169	736	Israel	24	54
India	70	193	Canada	20	50
United Kingdom	48	180	Brazil	16	39
Germany	29	81	Korea	14	33

Source: worldpopulationreview.com

<sup>30)</sup> Global Innovation Index 2023: Innovation in the face of uncertainty (wipo.int)

<sup>31)</sup> GEM Global Entrepreneurship Monitor (gemconsortium.org)

On the other hand, the number of unicorn companies with an enterprise value of US\$1 billion or more is also used as an indicator to compare and evaluate the competitiveness of startup ecosystems.<sup>32)</sup> [Table 1-3] shows the number of unicorn companies and enterprise value of each country in the world, and Korea ranks 10th in terms of the number of unicorn companies with 14, and 11th in terms of enterprise market value after Australia. Considering the above various startup ecosystem capabilities and performance indicators, it can be said that the global ranking of Korea's startup ecosystem is around 10th.

## 5 Key Growth Drivers of Korea's Startup Ecosystem

So, what are the drivers behind this phenomenal growth of the startup ecosystem? The creation and growth of Korea's startup ecosystem can be attributed to the pioneers of the first generation of venture capitalists. They coined the term venture in Korea in the 1980s and created a business ecosystem with a new innovation model, including new institutions and policies. Other key players in the ecosystem include the subsequent generation of entrepreneurs who have continued to grow the ecosystem in quantity and quality, the numerous venture capitalists and angels who support them, and the educators and technologists at universities and research institutes who recognized the importance of entrepreneurship early on.

In addition, as support organizations such as startup education and in-

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<sup>32)</sup> The Ministry of SMEs and Startups has not released official data on unicorn companies since February 2022 due to concerns about the reliability of valuations (see "Statistics on Korean Unicorn Companies Suspended... "We Need to Look at Investment Scale, Not Number of Companies" - news1.kr).

cubators have become more active than in the past, many new startups have been created based on innovative research results from universities and research institutes, and the emergence of successful ventures has stimulated entrepreneurs who dream of starting another startup. As a result, one of the most encouraging features of the startup ecosystem is that entrepreneurs and key personnel from successful ventures are becoming serial entrepreneurs and establishing infrastructure such as venture capital, accelerators, and incubators to foster and support junior entrepreneurs, creating a virtuous cycle.<sup>33)</sup>

But above all, the growth of the current startup ecosystem can be attributed to the consistent government policy support over the past 40 years, despite the ups and downs of various governments. Since the enactment of the Special Act on Venture Business Support (BEN Act) in 1997, various support policies and systems have been put in place to build a startup ecosystem and create an environment for venture businesses to grow from startup, investment, growth, and recovery. For example, a program to provide subsidies to entrepreneurs for startup preparation and technology development, a loan program from the Technology Guarantee Fund to lend initial operating funds, the development of venture investment funds that make equity investments in startups and venture capital firms that manage them, and the opening of the KOSDAQ market, where growing venture firms can disclose their shares.

The bursting of the venture investment bubble in the early 2000s provided entrepreneurs and investors with the opportunity to learn from their failures, which is the basis for the recent second venture boom. In particular, the government's recent expansion of financial support and investment

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<sup>33)</sup> I'm a big shot, I fail, I try again...Startup addicts, startup ecosystems.(<https://www.hankyung.com/economy/article/2022120839671>), Naver, Kakao, Daum, Timon Mafia, etc. (See the article on South Korea's PayPal Mafia, [www.romanceip.xyz](http://www.romanceip.xyz)),

has contributed to the revitalization of the venture ecosystem. The budget for support for early-stage companies has increased from KRW 500 billion in 2017 to KRW 1.3 trillion in 2022, and about two-thirds of the cumulative budget of KRW 7.3 trillion since the launch of the Korea Fund of Funds in 2005, or KRW 4.7 trillion, was invested between 2017 and 2021.<sup>34)</sup>

In addition, government and private investments in IT infrastructure and R&D have been steadily expanding over the past two decades, and it can be said that this has served as the soil and seeds for many recent startups and ventures. Currently, Korea's level of science and technology is not only catching up with advanced countries, but in some fields, it is even surpassing them, making a leap to become an innovation leader.

In the end, the ecosystem centered on innovation-based startups has been able to develop to its current level because the underlying science and technology, management knowledge, and financial infrastructure have dramatically increased compared to the past. In addition, the government's policy to commercialize R&D, a change in social culture toward entrepreneurship, and the emergence of entrepreneurial talent are the drivers of the current startup ecosystem.

## **6** Characteristics, Strengths, and Weaknesses of Korea's Startup Ecosystem

The characteristics of Korea's startup ecosystem are closely related to the growth process and drivers described above, and their strengths and weaknesses are the flip side of the same coin.

The strengths of Korea's startup ecosystem include: (1) the influx of rela-

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<sup>34)</sup> Byung-Heon Lee (2022)

tively high-quality human resources from universities and research institutes based on the government's initiative and various support systems; (2) the emergence of fund managers with more than KRW 1 trillion; (3) the growth of private facilitators in the ecosystem, including leading accelerators such as Primer, SparkLab, Futureplay, and Blue Point Partners; and (4) the presence of collaborative global conglomerates such as Samsung Electronics and Hyundai Motor Company and first-generation growth ventures such as Naver and Kakao.

However, weaknesses include (1) the creation of a government-led startup ecosystem has led to a deepening of dependence on the government, resulting in a lack of self-sustaining power of the market itself, (2) the startup ecosystem itself is highly concentrated in the Seoul metropolitan area, and despite active efforts by many local governments, it is still concentrated in Seoul and Pangyo, The ICT, O2O, platform, and bio industries are highly concentrated in Seoul, Pangyo, and Daedeok Research Complexes, and the number of ventures with business models centered on the service sector rather than technology has recently increased. (4) The shortage of technical manpower, especially in the software field, is at a serious level, and the capabilities of middle managers in venture companies are still far from that of large companies.

Moreover, compared to the U.S. and China, not only is the absolute size of the startup ecosystem small, but it is also structurally weak in that it is still operating mainly in the domestic market, with weak connectivity to overseas ecosystems, resulting in a relatively low level of internationalization. In particular, the lack of 'born global startups' (ventures with human resources and business models aimed at the global market from the outset) and outbound global capabilities to expand into overseas markets, as well as inbound global capabilities and social environment for foreigners with excellent skills and entrepreneurship to participate in the domestic startup

ecosystem are very weak.

However, the most significant limitation facing Korea's startup ecosystem is the government's tight regulations and slow deregulation. There have been long-standing calls to change positive regulations to negative ones, especially in the financial, healthcare, education, and environmental sectors, where new ventures are being created and grown around the world, such as fintech, edtech, digital health, and green tech. Such regulations make it difficult for first-movers with innovative models or startups that can lead disruptive innovations to take off.<sup>35)</sup>

As a result, the characteristics of the Korean startup ecosystem are characterized by fertility and death, with individual startups growing slowly and rarely becoming global companies.<sup>36)</sup> This is due to the limitations of Korea's market size as mentioned earlier, the fact that 2/3 of B2B companies supply existing large and medium-sized enterprises in Korea, and the lack of global capabilities to enter the global market.

Following this high-level background and analysis of the current state of play, the following chapters will provide a more detailed analysis of each of the key players in the startup ecosystem. In this chapter, we will look at the main players in our startup ecosystem - startups and ventures- and how their relationships with the four key partners - venture capitalists, accelerators, universities and research centers, and large corporations - have his-

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**35)** The trend of unicorns and pre-unicorns shows that the biggest obstacle is the legal and institutional restrictions on their business innovation and conflicts with related interest groups. Soka's Tada service was acquitted by the Supreme Court after a four-year court battle, but the business was already ruined and acquired by Viva Republica. In addition, startups with innovative service models such as Samtsumsam and Rotok are struggling with conflicts with related associations and stakeholders, and it is difficult to expect the development of the entire startup ecosystem, not just unicorns, if they cannot resolve them. Bizhankook(bizhankook.com)

**36)** Kim, Sun-Woo, Oh, Yuri (2022). For example, among the world's top 10 unicorns, Korea has only one toss.

torically developed and are currently at different levels. We will also examine the key environmental factors that influence the relationships between these ecosystem actors, including government policies, regional characteristics, and socio-cultural factors. Finally, we will discuss the challenges and strategies that we need to address now by integrating the limitations of our startup ecosystem and the desirable future direction presented in each chapter into a macro view. In particular, I would like to discuss how the existing industrial ecosystem centered on large companies and the startup ecosystem can organically converge and create synergy, and how this can help revitalize our stagnant economy.

## Annex Detailed Measurement Indicators for the Startup and Venture Ecosystem

**Table 1-4** Detailed Measurement Indicators for the Startup and Venture Ecosystem

Category	Enterprise Index(10)	Investment Indices(9)	Government Indices(8)
Indicators	<ul style="list-style-type: none"> <li>• Number of Startup Companies</li> <li>• Number of Technology-Based Startup Companies</li> <li>• Number of Venture Companies</li> <li>• Number of Large-Scale Venture Companies (over KRW 100 billion)</li> <li>• Employment by Startup Companies</li> <li>• Employment by Venture Companies</li> <li>• Revenue of Venture Companies</li> <li>• Startup Rate</li> <li>• 5-Year Survival Rate</li> <li>• R&amp;D Expenditure of Venture Companies</li> </ul>	<ul style="list-style-type: none"> <li>• Number of Investment Institutions</li> <li>• Number of Invested Companies</li> <li>• Number of Venture Investment Deals</li> <li>• Amount of Venture Investment</li> <li>• Amount Raised by Venture Funds</li> <li>• Available Capital of Venture Funds</li> <li>• Total Exit Amount</li> <li>• Number of IPO Companies</li> <li>• Number of M&amp;A Companies</li> </ul>	<ul style="list-style-type: none"> <li>• Budget for Startup Support</li> <li>• R&amp;D Support Amount for Startup Companies</li> <li>• R&amp;D Support Amount for Venture Companies</li> <li>• Contribution Amount to the Fund of Funds</li> <li>• Investment Amount by the Fund of Funds</li> <li>• Policy Financing (excluding Fund of Funds contribution)</li> <li>• Technology Guarantee Amount for Startup Companies</li> <li>• Technology Guarantee Amount for Venture Companies</li> </ul>

Source: Kim Sun-Woo et al. (2021). A Study on Measuring the Startup and Venture Ecosystem. *Venture Entrepreneurship Research*, 16(6), 31-42.



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Part **2**

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# Development and Current Status of Key Stakeholders in the Startup Ecosystem

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**Chapter 2** Historical Development and Current Status of Korean Venture Firms

**Chapter 3** The History and Current Status of Korean Venture Capital

**Chapter 4** Co-evolution of Startups and Support Organizations

**Chapter 5** The Role of Universities in the Startup Ecosystem

**Chapter 6** The Startup Ecosystem and Conglomerates

**Chapter 7** Startup Policy in Korea

**Chapter 8** Regional Startup Ecosystems in Korea

**Chapter 9** Startup Culture in Korea



## Chapter 2

# Historical Development and Current Status of Korean Venture Firms

1. Changes in Korean Venture Firms Over Time
2. Localization Ventures
3. Internet Ventures
4. Mobile Ventures
5. Platforms · Bio Ventures
6. Obstacles and Challenges of Growing a Startup Company

Venture companies in Korea began in the 1980s. At that time, Korea was experiencing economic growth, and the government implemented various policies to foster venture companies. As a result, the number of venture companies grew rapidly in the 1990s. In particular, venture companies in the information and communication field grew significantly, becoming the hope of the Korean economy during the foreign exchange crisis and contributing to the growth of Korea as a global IT powerhouse.

The IT bubble burst in 2000 and the entire venture ecosystem suffered, but since then, ventures and startups have continued to grow. In particular, the venture ecosystem in the mobile sector has grown significantly once again since the introduction of smartphones, and startups in the platform and bio sectors have continued to grow in quantity and quality, playing an important role in the Korean economy.

**Figure 2-1** Status of Venture Startups



Reference: Venture Companies at a Glance, Ministry of SMEs and Startups, Venture Verification System, [smes.go.kr](https://www.smes.go.kr)

Source: Comprehensive Management System for Venture Verification, <https://www.smes.go.kr/venturein>

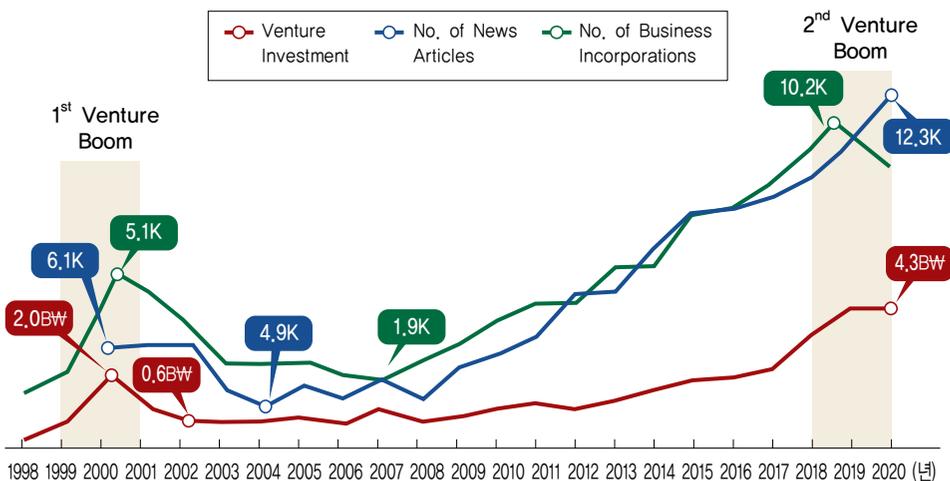
In this chapter, we will introduce the changes in venture companies over the years, explain the development history of venture startups in the order of localized ventures, internet ventures, mobile ventures, and platform/bio ventures, and discuss the obstacles to venture startup growth.

## 1 Changes in Korean Venture Firms Over Time

Looking at the changes in key indicators of the startup ecosystem, the amount of venture investment, which was KRW 2 trillion in 2000, has exceeded KRW 4.3 trillion as of 2020, and media attention to startups and ventures has grown at the same time.

The late 1990s also saw the dot-com frenzy, the so-called “first venture boom.” In the early 2000s, more than 60,000 new companies were created annually, but after the IT bubble burst, venture creation stagnated until the late 2000s. Since the 2010s, the number of startups has reached record

Figure 2-2 Changes in Key Indicators of the Startup Ecosystem (1998–2020)



highs every year, surpassing 120,000 in 2020.

For the record, venture and startup are both used to refer to new companies, but there is a slight difference. In legal terms, a venture company is a company that meets certain requirements stipulated in the Act on Special Measures to Foster Venture Companies and has excellent technological innovation and business growth. Under this law, a venture company is a small and medium-sized enterprise that is recognized by the government as having a relatively high level of technology and growth compared to other companies and needs to be supported, and falls under one of the following categories: venture investment company, research and development company, or technology evaluation guarantee and loan company. The system has been continuously revised since its implementation in 1998, and in 2021, it was completely reorganized into the private sector-led venture company con-

**Table 2-1 | Status of Venture Companies**

• Venture Companies as of August 31, 2022 (36,429 total)

Type	Venture Investment	R&D	Innovation-driven Growth	Guarantees/Loans	Preliminary Ventures	Total
Number of Companies	5,191	5,669	17,166	8,210	193	36,429

• Status of Venture Verification Since the Implementation of the Private Sector-led Venture Verification System(as of August 31, 2022)

Type	Verified Companies 2021 (2021.2.12 – 2021.12.31)	Companies Verified in 2022 (Jan. 1, 2022 – Aug. 31, 2022)		
		New	Re-verified	Subtotal
Venture Investment	2,156	823	1,395	2,218
R&D	2,777	329	1,978	2,307
Innovation-driven Growth	9,536	2,388	5,304	7,692
Preliminary Ventures	82	54	1	55
Total	14,551	3,594	8,678	12,272

Source: National Venture Capital Association, <https://www.smes.go.kr>

firmation system, which allows companies that are developing or commercializing new technologies to receive tax benefits, financial support, and infrastructure support from the government if they are confirmed as venture companies. As of the end of December 2022, there were a total of 35,123 venture companies in Korea, and 12,272 companies were confirmed as venture companies after the implementation of the private-led venture company verification system.

A startup is a term popularized in Silicon Valley after the dot-com bubble, and refers to a young company with innovative technology and ideas. Startups are also characterized by rapid growth and are created by entrepreneurs to find, develop, and validate a scalable business model.

**Figure 2-3 The Evolution of Venture Companies in Korea<sup>1)</sup>**

	<1 <sup>st</sup> Gen> 1980–2000	<2 <sup>nd</sup> Gen> 2000–2010	<3 <sup>rd</sup> Gen> 2010–2019	<4 <sup>th</sup> Gen> 2020–
	Localization	Internet	Mobile	Platform, Bio
Key Characteristics	Quantitative expansion of venture companies and venture capital	Contraction of venture startup investment → Venture Ice Age	Recovery of venture startup investment → Venture Renaissance Period	Post-Pandemic Era → Contactless Economy
Business Strategies	Localization of electronic, machinery, and component industries	Expansion of internet infrastructure → Provision of internet application services	Integration of mobile internet technology with offline businesses	Platform-driven by new technologies * Artificial Intelligence (AI), Big Data, 5G, Autonomous Driving, Cloud, IoT, etc,
Notable Co.	Medison, Mirae Industry, TurboTech	Naver, Daum, Nexon, NCSoft, AhnLab, Hancor	Kakao, Woowa Brothers, Coupang	Dunamu, Danggeun Market, and approximately 20 unicorn companies

<sup>1)</sup> Lee Byunghoon (2023), Presentation at the Internet History Project KR50 Workshop. 2023. 6.27.

## 2 Localization Ventures

In the 1970–1980s, Korea focused on localizing technology for economic development. The government expanded investment in technology development and implemented various policies to encourage companies to develop new technologies. Localization of technology in new industries such as information and communication technology and semiconductors was actively promoted. The government invited outstanding Korean scholars from abroad and strengthened domestic research and development capabilities. In particular, computer localization and Internet research became the basis for the emergence of venture companies.

Until the mid-1980s, Korea's small and medium-sized enterprises developed mainly as subcontractors for large companies. They subcontracted work that was difficult or expensive for the large companies to do themselves, such as assembling parts and quality inspection. But in the mid-1980s, a new demand began to arise. As large companies expanded into new technologies, they began to demand new parts and services from SMEs. To meet this demand, SMEs stepped up their technology development and marketing.

The early ventures were closely linked to the introduction and development of computers and the internet, the technological infrastructure introduced in the 1980s. Venture firms emerged in the existing ecosystem of SMEs centered on subcontracting to large corporations, and were sometimes called venture or technology-intensive SMEs to differentiate them from existing SMEs. Many of these companies were founded by engineers from KAIST and Seoul National University, and they were the first in Korea to create and market products or services based on their own technologies.

The first venture was Sambo Computer (formerly Sambo Electronics Engineering), which was founded in 1980. Founded in 1980 with a capital of 10 million won, CEO Yong-tae Lee, a U.S.-educated student, started the company with

seven employees in the Cheonggyecheon office and commercialized the first personal computer in Korea. In 1981, Lee Bum-chun, the first doctor of computer science at KAIST and a professor at his alma mater, founded Qnix Computer with five colleagues and juniors to develop Korea's first word processor. In 1981, Song Ho-geun, a graduate of the Seoul National University College of Engineering, founded YG-1 (formerly Yang Ji Won Tools).

In 1983, Hyunjung Choi founded Bitcomputer as a student at Inha University, and Munsul Jung founded Mirae Industry, a semiconductor inspection equipment company. In 1985, Lee Min-hwa founded Medison, which he started with six colleagues with a capital of 50 million won after receiving his Ph.D. in ultrasound diagnostics from KAIST. In 1986, Kim Ikrae founded Dow Technology, and in 1988, Jang Heung-soon, a KAIST graduate, founded Turbotech, a company specializing in industrial automation equipment, and supplied automation equipment to Hyundai Motor, Kia Motors, and Hyundai Heavy Industries. In 1989, Lee Chan-jin and Byun Dae-gyu, both from Seoul National University, founded Hangeul Computer and Humax, respectively.

The early technology ventures are closely related to the introduction of computers in Korea and the demand for "Korean-ization" support development. In the 1980s, as PCs became widespread in university computer labs and computer labs, computer clubs began to study computers, and non-memory chip companies such as Intel and Texas Instruments introduced microprocessors (miniaturized computational processing devices), which gave them the opportunity to program their own programs to make medical equipment and set-top boxes. In the 1980s, venture companies were mostly technology-based and were called "technology-intensive SMEs," "adventure companies," or "new technology companies," but in the 1990s, the term venture began to be used. In general, venture companies have come to mean companies founded by entrepreneurs with strong growth motivation based

on new technologies in new business sectors such as computers, electronics, information and communication, chemistry, and biotechnology, and engaged in adventurous management (Venture Business Association, 2015).

### 📍 Cases of Venture Creation in Korea

#### *Venture Startups by Alumni of Seoul National University College of Engineering*

- Lee Yong-tae, Chairman of Trigem Computer
- Song Ho-geun, CEO of YG-1 (formerly Yangjiwon Tools)
- Kim Kwang-soo, President of Doo-In Electronics
- Byun Dae-gyu, President of Humax
- Lee Chan-jin, President of Hancorn (Hangul and Computer)
- Lee Woong-geun, President of Seoul System

#### *Venture Startups by KAIST(Korea Advanced Institute of Science and Technology) Alumni*

- In 1981, Lee Beom-cheon, the first PhD graduate in Computer Science at KAIST, founded Qnix Computer with four junior colleagues. The company developed 8-bit and 16-bit PCs and word processors. It recorded 130 billion KRW in sales in 1996 but went bankrupt during the 1997 Asian Financial Crisis.
- In 1985, Dr. Lee Min-hwa of the Department of Electrical Engineering, along with six colleagues from the Ultrasonic Research Lab, founded Medison, a company specializing in ultrasound diagnostic equipment.
- In 1988, Dr. Jang Heung-soon of the Department of Electrical Engineering founded TurboTech, a factory automation equipment company.
- In 1991, Ahn Young-kyung of the Department of Computer Science founded HandySoft.
- In 1994, Kim Jung-ju of the Department of Computer Science founded the game company Nexon.
- In 1996, Jang Byung-kyu of the Department of Computer Science founded Neowiz.
- During the 1990s, KAIST's Computer Science graduate program also produced prominent entrepreneurs such as Lee Hae-jin (founder of Naver) and Kim Young-dal (founder of IDIS).
  - ⇒ In 1991, the KAIST Entrepreneurs' Association was established with 13 founding members.

Source: Lee, Byungheon (2023). Presentation at the Internet History Project KR50 Workshop, 2023.6.27.

The early ventures had in common the pursuit of entrepreneurship to create value and change society by capitalizing on the opportunity to introduce new technologies utilizing computers in engineering school labs or clubs. The main business was centered on developing and delivering hardware equipment. A relatively autonomous and flexible corporate culture was formed, and a new behavior emerged in which students chose to start a business rather than prepare for employment in a large company while attending university or graduate school.

### 📍 Early-stage ventures

#### ① *Trigem (Sambo) Computer*

Sambo Computer was founded in Cheonggyecheon in 1980 by Dr. Yongtae Lee, who studied abroad in the United States, and was formed by integrating companies such as Sambo Electronics Engineering and Alex Korea Software Industry. Sambo Computer produced the first PC in Korea and led the printer market in partnership with Japan's Seiko Epson. Since the 1990s, the company has expanded its business into the telecommunications sector and provided Korea's first high-speed Internet service, Durunet. The company also entered the United States at a time when PCs and the Internet were gaining popularity and exported low-cost PCs to the United States under the name EMachines. Although Sambo Computer faced a crisis due to the rapidly changing PC market conditions and the dot-com bubble in the U.S., it is a company that gathered major talents from Korea's early technology ventures and supported other ventures, driving the growth of the information and communication industry.

#### ② *Medison*

The company was founded in 1985 by Lee Min-hwa as a portable ultrasound diagnostic device with a plan to create medical devices using computers. By the time it went public (1996), the company had grown to a market capitalization of 1.5 trillion won. It has numerous subsidiaries, which has led to the emergence of many founders from Medison. In addition, Chairman Lee Min-hwa created the Venture Business Association and took the lead in promoting the introduction of laws and systems necessary for venture businesses, contributing to the enactment of the KOSDAQ Market and the Venture Business Development Act.

Source: Sungmi Kim, Sungmin Jeon, and Sangsoon Kim (2023). A historical review of technological innovation entrepreneurship: Focusing on early stage ventures. *Journal of Business History*, 38(1), 31-47.

Since the mid-1990s, the rapid spread of the Internet and new technological and market opportunities in the information and communication industry have provided new opportunities for start-ups in Korea, a technologically underdeveloped country (Sung, 2001). This is because in the information industry, including the Internet, the industry and market were in the early stages of formation, and there are many fields where elemental technologies are more important than system technologies, so the disadvantage due to the technology gap with developed countries is relatively small, and the barriers to market entry are not high.

The venture ecosystem also became the hope of the Korean economy after the IMF crisis and an opportunity for the younger generation to challenge innovation. As the Korean economy was losing its competitiveness due to the collapse of chaebols, a consensus was formed that venture companies with youthful ambition and advanced technology should be the new hope for the economy.

#### Korea Venture Business Association

In 1955, the Venture Business Association was formed around KAIST's venturers' group, "Gwagihoe". The association proclaimed the "Venture Enterprise Vision 2005," which set a goal to reorganize Korean industry around ventures and serve as a new growth engine in 10 years. Dr. Min-Hwa Lee, president of Medison, became the president, and Dr. Kwang-Tae Kim, president of Future Systems, became the secretary general.

The Venture Forum held in March 1996 officially proposed the establishment of KOSDAQ to revitalize ventures. The Nasdaq in the United States had been established as a securities market for high-risk, high-return investors. It was concluded that a similar market in Korea was absolutely necessary for the

development of ventures, and efforts were made to establish the KOSDAQ on July 1, 1996. Representative venture companies such as Hangul Computer, Humax, and Bitcomputer were registered on the KOSDAQ.

In the second half of 1996, venture company presidents traveled around the country to promote start-ups with the Venture Startup Roadshow. The event sparked a venture boom in university towns, and starting with Seoul National University, the roadshow traveled to major universities across the country, including Pohang University of Science and Technology, Inha University, and KAIST, where more than 2,000 people participated. Afterward, students and researchers were inspired by the roadshow to start their own startup clubs.

The Venture Business Association also made a significant contribution to the enactment of the Venture Business Special Measures Act. It defined ventures as 'R&D-oriented SMEs' and established a systematic support infrastructure for venture startups in terms of funding, location, and manpower.

### 3 Internet Ventures

In 1982, the Internet was introduced and developed in Korea for the first time when then-KAIST professor Gilnam Jeon connected computers at Seoul National University and the Gumi Institute of Electronic Technology to a dedicated line with IP addresses. It was the second country in the world to successfully connect to the Internet after the United States. The rapid growth of PC communications created a user base, and with the transition to Internet services, businesses utilizing Internet infrastructure began to be created in the 1990s.

In 1993, Sangsu, Oh founded Saerom Technology, which initially provided a service for sending faxes over the Internet and Saerom Dataman, a PC communication terminal program. Later, the company offered a free international calling service through a web service called Dialpad, which be-

came very popular. Within six months of its listing on the KOSDAQ in August 1999, its stock price increased about 150 times, and its market capitalization exceeded 5 trillion won. The U.S. subsidiary of Saerom Tech's DialPad helped the company attract investment from the U.S. market when its headquarters was cut off from funding during the IMF foreign exchange crisis. However, after the dot-com bubble, the company faced a crisis and its stock price plummeted to a quarter of its peak within a year. Compared to Skype, which was founded by Swedish and Danish founders in 2003 and acquired by Microsoft in 2011 for a valuation of more than 9 trillion won, SaromTech's dialpad was an innovation that no other company in the world had tried before, but it was not a business success, which comes as a great disappointment.

As the IT industry, including the Internet, gained attention as a new economy and new industry, the so-called "IT bubble" occurred in the field of financial investment. Comparing the lowest stock price during the 1997 foreign exchange crisis and the highest during the IT bubble, the KOSDAQ rose from 60P to 281P in March 2000.<sup>2)</sup> The PER of Dreamline and Goldbank reached 9,999 times, and the bubble of OTC stocks was even more severe, often trading at more than 200 times the face value.

In November 1999, Durunet, a high-speed Internet service company funded by Sambo Computer, became the first Korean company to be listed on the NASDAQ. The stock offering was a success with \$4 billion in subscriptions, but the company went into receivership in 2003 due to the failure of the secondary offering and was delisted from NASDAQ. In

<sup>2)</sup> The KOSPI started at 100 in 1996, but after 2000, the index dropped sharply, so in 2004, the index was raised 10 times to 1,000. Therefore, the current KOSPI is called 600P. The reason for raising the base unit of the KOSPI by 10 times was to improve the low sensitivity to market movements and poor index discrimination due to the excessively low absolute value of the KOSPI. By increasing the KOSPI by 10 times from 100 to 1,000, we improved the above points. Therefore, 60P in 1997, the unit of index change, is 600P in today's KOSPI.

addition, due to the venture-related stock manipulation scandal and the bursting of the U.S. dot-com bubble, the KOSDAQ closed at 52P on December 31, 2000, a level of one-fifth. Goldbank, Jangmedia, Dreamline, Howry, and Locus were among the companies that soared during the IT bubble, but were delisted after the IT bubble burst, and the KOSDAQ came to be associated with the stigma of day trading and stock price manipulation. Only Medison, Korea Telecommunications, Daum Kakao, and Interpark Holdings are still around today, and Sarom Technology remains on the KOSDAQ under the name of investment firm Solvone. During this period, venture firms jumped into new industries such as IT and BT with huge amounts of money from the ‘Don’t Ask, Don’t Tell’ investment, but it can be said that speculative fantasies were overdone in the absence of technology or industrial base.

#### Venture 4 Gates

The early 2000s were the era of “Trial of the Venture”. The “four gates” that began to burst in October 2000 reinforced the perception that “venture = fraud”. At the same time, the venture bubble burst and the investment climate cooled down. Many ventures were shut down and star entrepreneurs were arrested.

- **Chung Hyun-joon Gate:** In October 2000, allegations surfaced that Chung Hyun-joon, president of Korea Digital Line (KDL), and Lee Kyung-ja, vice chairman of Dongbang Bank, had embezzled tens of billions of won from the bank’s coffers and engaged in fraudulent schemes against investors. At the time, President Kim Dae-jung said, “Instead of focusing on research and technology development, venture capitalists invested in mergers and acquisitions and bought 20 companies to imitate chaebols.” Chung, in his early 30s, was sentenced to nine years in prison for illegal loans worth 230 billion won, embezzlement, and fraud.
- **Jin Seung-hyun Gate:** This scandal broke in November 2000 and is often referred to as the second Chung Hyun-joon Gate. MCI Korea Vice Chairman Jin Seung-hyun, a mergers and acquisitions expert in his 20s, received an illegal loan of more than 30 billion won after acquiring Open Mutual Credit & Depository, which was revealed in the media. During the investigation, prosecutors found that Jin took illegal loans

of about 230 billion won from Open Bank, Hans Jongkum (Jongkum, short for 'Comprehensive Financial Company' is a type of non-bank financial institution in South Korea that is licensed to conduct a wide range of financial activities, particularly short- to medium-term corporate financing), Regent Jongkum, and others, of which he was a major shareholder. He was suspected of using the money to lobby political parties. In 2002, the Supreme Court upheld a five-year prison sentence for Mr. Jin.

- **Lee Yong-ho-gate:** In September 2001, G&G Group Chairman Lee Yong-ho, who had been highlighted in the media as a successful venture capitalist, was detained by prosecutors on charges of embezzlement and stock price manipulation. He was accused of manipulating the stock price of his company, Samaeindustries, to make a profit of 15 billion won (\$15 million) while promoting a treasure ship excavation project off the coast of Jindo, South Jeolla Province. Suspicions of political lobbying arose in the process, and the prosecutor's office in charge of the investigation said it had obtained a list containing the names and contact information of more than 1,800 prosecutors and officials with ties to Lee. In November 2005, the Supreme Court upheld his six-year prison sentence.
- **Yoon Tae-sik Gate:** Also known as the Suzy Kim case, this is a case of political lobbying. In 1987, Yoon Tae-sik murdered his wife, Suzy Kim, in Hong Kong, falsely claiming that he was the victim of an attempted North Korean smuggling case, which was only possible because the Ministry of Information covered up the truth. He returned to South Korea and turned entrepreneur in September 1998, founding a venture called Pass21, which developed fingerprint recognition technology. Pass21's rapid growth was favored by officials. In December 2001, the case came to a head when Geumgamwon accused Yoon of embezzling 2 billion won in company funds. In May 2003, the Supreme Court upheld his sentence of 15 years and six months in prison.

Source: <https://jmagazine.joins.com/forbes/view/323060>

The tarnished image of ventures and business failures have also had the side effect of reducing the risk-taking spirit of the younger generation. Many entrepreneurs have ended up as credit delinquents, as early ventures were based on bank loans and founder guarantees. The biggest lesson of the first venture boom was the lack of a safety net for startups.

As the venture ecosystem entered an “ice age,” the growth of venture firms stagnated and the country’s innovation capacity declined. More than one-third of KOSDAQ companies have experienced stagnant growth, difficulty in raising funds, and exposure to unscrupulous corporate hunters, causing KOSDAQ to lose market trust (Lim, Woo-taek, 2013). The government implemented venture health policies after the bursting of the IT bubble, but these policies worsened the social perception of ventures and destroyed the venture ecosystem that had been established (Lee, Min-Hwa, Choi, Sun, 2015). The IT bubble in 2000 was followed by a venture dark age or venture ice age for about 10 years. As negative media reports such as “titular ventures,” “venture bubble ventures,” and “moral hazard” continued, the term startup began to be used more and more instead of venture.

However, since the 2000s, there have been a number of applications that utilize the Internet infrastructure that have been able to provide real value to users and secure sustainable business models. The most representative of these services are Daum and Naver. DAUM, better known to us as Hanmail, was launched in 1995 by the founders, including CEO Lee Jae-woong, a graduate of Yonsei University, with the concept of a magazine (media) related to art. In May 1997, when there were many PC communications users but only a few Internet users, Daum began offering a free lifetime email service called Hanmail.net, and in less than a year it grew to become the nation’s email service with more than 1 million users. The business model was basically based on advertising from the beginning. It was believed that it would take time, but that the advertising market would be activated once the features were provided for free, traffic reached a certain level, and the online advertising market matured. To this end, we initially invested a lot of existing offline advertising personnel such as Cheil Worldwide and LG-AD, and we also considered freemium as a business model (premium mail capacity service), but it did not grow as much as we expected. We also

considered introducing,<sup>3)</sup> an online postage stamp system, as an experiment for our business model, but it was more of a spam suppression program, and it debated later withdrawn.

Naver was founded in 1997 as an internal venture of Samsung SDS, and was renamed NHN in 2000 when it merged with HanGame. Naver had advanced search technology, something that even global companies like Microsoft and Yahoo had failed to do. This is historically significant considering that at the time, only China, Russia, and South Korea had their own search services outside of the United States. As for the business model, NAVER used a strategy of securing traffic by investing profits from Han games into the development of new web services such as webtoons and intellectuals. NAVER's search advertising and commerce revenue grew significantly as the keyword advertising model, in which advertisers pay to display ads on search portals based on keywords entered by users through search, took hold.

#### Korea Internet & Security Association

In early 2000, the Korea Internet Business Association was formed, with more than 1,000 Internet companies participating. Auction CEO Lee Geum-ryong was elected as the first president, and his main role was to create a healthy ecosystem for the development of the Internet industry and to promote policy activities to promote Internet businesses. As an association of e-commerce companies, game companies, digital content companies, and telecommunications companies, NAVER, Daum, SK Communications, Kakao, Coupang, Nexon, NCSOFT, Dunamu, Meta Korea, Woowa Brothers, Netflix Korea, Gmarket, KG Inicis, ByteDance, and others were the main members.

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<sup>3)</sup> The next system was created as bulk mail grew in popularity, where you had to pay a fee to send bulk mail. Instead, the recipient would press an “informative” button and the sender would return the “postage” paid.

The Internet Business Association has emphasized the rights of Internet business operators and users, criticized the policies of telecommunications companies and conglomerates, and voiced criticism of unreasonable government regulations. It has been conducting continuous research activities such as the Internet Industry Regulation White Paper and Win-Win White Paper, the impact of the Online Platform Fairness Act, and self-regulation.

## 4 Mobile Ventures

In 2008, Apple's iPhone was released and a slew of smartphones inspired by it were launched in Korea. The Korean startup ecosystem was once again impacted by the creation of a new technological infrastructure, the mobile Internet. Smartphones provided consumers with a new experience and value of data communication on the go, which opened up new business opportunities.

Since 2010, growth ventures in the mobile and social commerce space have started to emerge. Startups such as Kakao, Line, Coupang, Ticketmaster, SundayToz, PartyGames, Baedal Minjok, and YellowMobile have started to perform at a level of revenue and valuation that is different from the previous venture dark ages. The rapid growth of startups has led to investment in the startup ecosystem and an influx of talented individuals. These success stories have shown that domestic startups have the potential to grow, which has attracted a lot of to the scene.

The 2010s and beyond have been the golden age of mobile ventures. KakaoTalk, Korea's leading mobile messenger service, has been popular since its launch and is now used by most Koreans with smartphones.<sup>4)</sup> As

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<sup>4)</sup> The number of KakaoTalk app users increased by 3% from 46.45 million in January 2022 to 47.9 million in January 2023, reaching an estimated 94% of the 51.2 million Korean

Kakao grew into Kakao Group with 114 affiliates, many new startups and business models emerged, especially as founders close to Chairman Kim Bum-soo, who has a lot of venture capital experience, merged Kakao with services and grew into subsidiaries.

Baedal Minjok is Korea's largest food delivery service that allows users to order and receive food via smartphone. In 2020, it was acquired by a German company for approximately KRW 5 trillion. Coupang, an e-commerce company, allows consumers to shop online through mobile devices. It was listed on the New York Stock Exchange (NYSE) in June 2021. Eleven years after its founding in 2010, Coupang was valued at 100 trillion won upon listing. It surpassed SK Hynix, LG Chem, and Naver to become the second-largest company by market capitalization after Samsung Electronics. Yanolja is a platform that allows users to book and pay for accommodations on their smartphones, and Toss is an IT company that provides various financial services such as remittance, payment, investment, and insurance through smartphones.

Many startups were able to emerge during this period, and as the performance of smartphones became more advanced, many smartphone-based O2O (Online to Offline) business models emerged, which quickly realized sales results. The simple payment system that supports payment in a simple way based on smartphones has become a very effective infrastructure for realizing small sales from a large number of customers. In the PC Internet environment, many services required complicated online payment procedures such as authorization certificates and Active X. However, smartphones made it easy to pay by omitting unnecessary processes and simplifying procedures through pre-authorization.

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smartphone users. <https://platum.kr/archives/202628>

### Korea Startup Forum

In 2016, the Korea Startup Forum was formed by 50 startups including Woowa Brothers (Baedal Minjok), Kurly (Market Kurly), Zigbang, and Viva Republica (TOSS). With the goal of becoming a “great country to start a business,” the organization strives to lead the revitalization of the startup ecosystem by improving regulations and proposing policies to grow new industries, and providing education, forums, and networking to strengthen startup capabilities. As of the end of 2022, it has grown into the largest startup organization in Korea, with more than 2,000 member companies.

COSPO focuses on activities that closely support the daily lives of startups and helps them grow by raising awareness, running councils, training and recruiting talent, and providing meeting places. At the same time, it conducts research on new industry development, startup regulation improvement, and digital transformation policies. Specifically, it has organized the global startup festival COMEUP, conducted more than 100 startup community programs, supported ICT regulatory sandboxes, and fostered SW innovation talent to revitalize the startup ecosystem.

This period was also characterized by startups attracting investment from global venture capitalists and a significant increase in valuation. By attracting large-scale investment and a management team with outstanding global capabilities and experience, the company was able to drive commercialization and achieve performance-based growth.

## 5 Platforms · Bio Ventures

Since the late 2010s, startups have been growing rapidly in size, and the concept of unicorns has become popular. A unicorn is a privately held startup with an enterprise value of more than \$1 billion. Technological changes such as artificial intelligence, big data, virtual reality (XR), and the Internet of Things (IoT) have played an important role in the emergence of these

large-scale startups. In addition, startups in the high-value-added sectors of bio, healthcare, materials, parts, and equipment, and general consumer goods that are closely related to daily life have continued to grow. As unicorns are mostly created through overseas venture capital investment, the profile of startup CEOs is gradually changing to executives with global experience such as consulting firms and investment banks rather than IT technologists.

**Table 2-2 | Status of Korean Unicorn Companies**

Company Name	Fields	CB Insights	Current Unicorns	Remarks
Yellow Mobile	Mobile	○	○	–
L&P Cosmetics	Cosmetics	○	○	–
Viva Republica (Toss)	Fintech	○	○	–
Yanolja	O2O services	○	○	–
WeMakePrice	E-commerce	○	○	–
GP Club	Cosmetics	○	○	–
Musinsa	E-commerce	○	○	–
Kurly	Fresh Food Delivery	○	○	–
Zigbang	Real Estate Brokerage	○	○	–
Bucketplace	E-commerce	○	○	–
RIDI	Content Platforms	○	○	–
IGA WORKS	Big Data Platforms	○	○	New in 2022
Megazone Cloud	Cloud Services	○	○	New in 2022
Tridge	Data and Trade Platforms	○	○	New in 2022
Dunamu	Fintech	△	○	–
Company A (name withheld)	Retail	×	○	–
Dangeun Market (Karrot)	E-commerce	×	○	–
Bitthumb Korea	Fintech	×	○	–
Yeogi Company	O2O Services	×	○	New in 2022
Oasis	Fresh Food Delivery	×	○	New in 2022

Shift Up	Mobile Game Developer	×	○	New in 2022
Korea Credit Data	SME SaaS Platform	×	○	New in 2022
Woowa Brothers	Food Delivery	△	×	M&A
Aprogen	Bio	△	×	M&A, Class of 2022
TMON (Ticket Monster)	Social Commerce	×	×	M&A, Class of 2022
CJ Games	Gaming	△	×	IPO (KOSPI)
Coupang	E-commerce	△	×	IPO (US, NYSE)
Krafton	Gaming	△	×	IPO (KOSPI)
HYBE	Entertainment	×	×	IPO (KOSPI)
Kakao Games	Gaming	×	×	IPO (KOSDAQ)
DoubleU Games	Gaming	×	×	IPO (KOSPI)
Pearl Abyss	Gaming	×	×	IPO (KOSDAQ)
It's Hanbul	Cosmetics	×	×	IPO (KOSPI)
SOCAR	Carsharing	△	×	IPO (KOSPI), Class of 2022
Total Count: 34		14	22	–

Note: △: Companies previously listed as unicorns by CB Insights but later excluded.

Source: Ministry of SMEs and Startups (2022)

This period was driven by unicorn ventures, led by platform companies such as DanggeunMarket, which created a platform to connect offline and online. New business models emerged as the traditional retail industry, especially convenience stores and hypermarkets, shifted from daily delivery of perishable food items to fast delivery of food items such as same-day, early morning, and instant delivery.

During the pandemic, social distancing has led to more time spent at home, which has created a variety of demands, and services to cope with this have grown rapidly. MarketKurlly is a delivery service that delivers food at dawn the next day when ordered on the same day, limited to the Seoul metropolitan area and Chungcheongbuk-do, and initially gained popularity among young people in Gangnam through word of mouth, but sales and

investment have increased significantly through aggressive marketing and distribution of high-quality food ingredients. Its main customers are women in their 30s and 40s from households with high incomes or women in their 20s who want to eat at least one meal for a two-person household. In the first half of 2020, the company attracted about 200 billion won in institutional investment, bringing its total cumulative investment to 420 billion won, and maximized the value of food by providing high-quality fresh food, reducing the time from farm to table through logistics innovation, and controlling the temperature through refrigerated and frozen delivery.

With Celltrion's success in the biosimilar business, pharma and bio has become the largest sector for bio startups in Korea. Bio startups are active in the fields of new drug development, therapeutic drug development, and diagnostic kit development.

Advances in artificial intelligence (AI) technology are driving startups to expand into the medical and bio space. Startups have been exploring business opportunities in various industries by utilizing AI technology in various fields, especially image analysis. Lunit, a medical AI startup that develops diagnostic and treatment software using AI, has developed a real-time medical image diagnosis service that utilizes deep learning-based universal image recognition technology to support early diagnosis of major lung diseases and breast cancer using chest X-rays. In particular, Lunit Insight, which is utilized for lung disease detection, has a 97% reading accuracy rate by applying deep learning technology, greatly improving doctors' ability to read X-rays. With more image data, the accuracy of the reading has increased, which in turn has gained the trust of doctors. To enter the healthcare industry, which is known for its high barriers to entry, Lunit pivoted to healthcare, where deep learning technology plays a key role in competitiveness, and gained expertise in identifying differences in X-ray screening environments across hospitals, countries, and cultures to improve the accuracy of data analysis.

In addition, new technologies and services are being developed in various fields such as digital healthcare, artificial intelligence healthcare, and wearable healthcare. In the device sector, there are also active startup activities in medical devices, in vitro diagnostic devices, and wearable devices.

## 6 Obstacles and Challenges of Growing a Startup Company

According to a study on startup survival rates,<sup>5)</sup> high startup survival rates are highly correlated with opportunistic startups, internationalization, and vigorous competition. In Korea, startup investment, the use of new technologies, and the level of competition are high, but policy efforts to increase the degree of internationalization are needed to improve the survival rate of startups.

In Israel, where startups typically have a high proportion of customers outside of their home region, one-third of startups are selling to international customers, and the results are impressive. When a country's economy is small, or the ecosystem itself is geographically small, internationalization is key to the growth of startups in the ecosystem. Nevertheless, many domestic startups have a very low level of internationalization capability or willingness. Lack of market information is the biggest factor in the difficulty of overseas expansion cited by domestic companies.<sup>6)</sup> Internationalization of startups can be understood as not only the creation and success of startups in Korea, but also the creation of startup cases that can grow globally and the

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<sup>5)</sup> Kim, Ki-Man (2021). Determinants of startup survival from a startup ecosystem perspective: A comparative analysis of OECD countries.

<sup>6)</sup> Son, Ha-Neum (2017). The implications of globalization in the entrepreneurship ecosystem. *Entrepreneurship Korea*, 6, 3-4.

strengthening of the startup ecosystem surrounding them. To this end, it is necessary to select and intensively support startups with global growth potential.

Korea has a relatively strong IT infrastructure environment, but it is necessary to invest more in infrastructure technology in the field of artificial intelligence and large-scale data construction, distribution, and utilization technology for startups to compete globally. As an infrastructure for the digital economy, information technologies such as the Internet of Things (IoT), cloud, artificial intelligence(AI), and big data solutions should be built and utilized to transform existing traditional business operations and services. In addition, the accumulation of practical data for AI development by industry and voluntary utilization by the private sector is low. The problem of IT manpower shortage is persistent, and measures should be taken to secure IT manpower to prototype and systemize startups' new industry ideas.

In addition, rapidly growing startups inevitably cause tension with existing industries. Stalled innovation due to inter-industry conflicts directly leads to a decline in competitiveness in the global market, which in turn leads to the loss of opportunities for future generations. Therefore, it is necessary to create a fair competition environment for traditional industries while utilizing the challenging spirit of innovative startups. A fair legal system should be established without favoring traditional industries with existing interests, and politicians, public officials, and local governments should play a fair role as referees.

### Examples

#### **1** *LawTalk*

Conflicts between existing interest groups and startups in the legal, medical, and other professional fields have intensified. In the legal field, the Korean Bar Association (Byeonhyeop) is suing online advertising platform 'LawTalk' for lawyers, and in the beauty and medical field, the Korean Medical Association and others are pushing for sanctions and regulatory legislation through the National Assembly

against medical advertising platforms ‘Gangnam Unni’ and ‘Bobby Talk’ for violating their own regulations and laws. Like Tada, which had to close its business due to legislation to protect vested interests, it is difficult to innovate due to the backlash from existing industries.

### ② *Meat Box*

Meat Box is a company that distributes livestock products online, due to a regulation (established in the 1960s) that requires livestock distribution centers to have refrigerators, many centers have an unused and empty refrigerator at its premises. An online-to-offline (O2O) startup that allows customers to book and receive nail art services via mobile without having to physically visit a nail salon was shut down by ward officials for violating the Public Health Management Act.

Korea’s venture startup scene has been around for more than 40 years, and while the culture of senior investing and advising juniors is forming, it is hard to say that the so-called “pay itforward” culture as a startup ecosystem is fully established. Startups face many challenges from the very beginning, so it is very important to pass on the experience and know-how of senior entrepreneurs. There are cases of successful businessmen establishing venture capital firms or holding startup competitions to discover new startup entrepreneurs. There are also cases of successful startup founders voluntarily sharing their experiences and donating their wealth. However, the Korean startup industry relies heavily on informal university and workplace connections, and there is still room for improvement in the awareness of mid- to long-term social contributions.



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## Chapter **3**

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# The History and Current Status of Korean Venture Capital

1. Overview of Venture Capital
2. Overview of Corporate Venture Capital
3. Development Trajectory of the Korean Venture Capital Investment Market
4. Current Landscape of the Korean Venture Capital Market
5. Challenges and Future Directions for Venture Capital in Korea
6. Concluding Remarks

Venture capital (VC) is a term that anyone involved in the startup ecosystem is familiar with and knows from experience is very important. On the other hand, there are many people who don't know exactly what it is and feel that it is a mysterious topic because it was not covered in school. Therefore, this chapter aims to introduce the concept of venture capital and the history and current status of the domestic venture capital market in an easy-to-understand manner. This chapter is divided into five topics: (1) an overview of venture capital, (2) an overview of corporate venture capital (CVC), (3) the development history of the Korean venture capital investment market, (4) the current state of the Korean venture capital market, and (5) future challenges for the Korean venture capital investment market.

In the first part, "An Overview of Venture Capital," we covered the concepts, history, role and importance of venture capital in the market, the structure of venture capital funds, the types of venture capital at different stages of a startup's life cycle, and the legal types of venture capital firms. This can be a rather dry topic, so I mixed it up with familiar examples. The second topic, the concept of corporate-type venture capital, is briefly introduced here, and more details are covered in Chapter 6. The third topic is the development of the Korean venture capital market. As already introduced in other chapters, Korea's venture capital investment market is inextricably linked to the development of the domestic startup ecosystem, so it can be roughly categorized into the following periods: the embryonic period (1980s to early 1990s), the first venture boom (late 1990s to 2000), the downturn and transition period (2001 to early 2010s), and the second venture boom (mid-2010s to 2022). The chapter concludes with a brief introduction to the current state of the Korean venture capital market. Finally, given the development history and current status of the venture capital investment market discussed in this chapter, we consider policy recommendations necessary for the further growth of the Korean startup ecosystem and present them as fu-

ture challenges for the Korean venture capital investment market.

## 1 Overview of Venture Capital

Venture capital is a type of risk capital, which is financial capital that seeks high capital gains by providing funding to early-stage companies with high growth potential and providing comprehensive management and technical guidance. The term risk capital means investment capital that does not have a certain return. In other words, an investor takes on the risk of losing all of his or her money. As such, venture capital is used for (ultra) high-risk investments, but it can also be used to fund the early stages of high-growth companies, allowing them to grow rapidly and increase their valuation.

Therefore, venture capital is typically used to fund innovative, privately held, early-stage, high-growth, science and technology-based companies. Of course, even if a company is not based on science and technology, it can receive investment from venture capital as long as it has the potential for high growth. For example, P. F. Chang's, a well-known Chinese restaurant chain in Korea, Amazing Brewing Company, a craft beer bar famous for its hot spot in Seongsu-dong, and GOPIZZA, a franchise of one-person wood-fired pizza with a "honbap" concept, are all companies that received venture capital investment from Silicon Valley in the United States.

### History of Venture Capital

Historically, the venture capital industry as we know it today was born in the mid-20th century in the United States as part of the Private Equity Fund in response to the uncertainty of how to finance technological innovations whose success was unknown. Many believe that modern venture capital investing began in 1957 when an investor named Arthur Rock, working for a

New York investment firm, made an equity investment in a startup company called Fairchild Semiconductor in California.

Arthur Rock then moved to San Francisco, California, in 1961 to start a new venture capital investment firm, which became very successful, investing in Apple and Intel from their inception. Fairchild Semiconductor, meanwhile, was founded by eight key employees of Shockley Semiconductor, a company founded by Stanford University professor William Shockley, who won the Nobel Prize in physics for inventing the transistor, a key component of semiconductors and computers, who were dissatisfied with Shockley's management style. These individuals, known as the "Traitorous Eight," would go on to become the founders of such prominent companies as Intel, Advanced Micro Devices(AMD), Kleiner Perkins,<sup>1)</sup> and others, and were instrumental in shaping Silicon Valley as we know it today in California, USA.

### The Role and Importance of Venture Capital

Venture capital plays a very important role in pioneering new industries, economic growth, job creation, technological innovation, and social development.<sup>2)</sup> In addition, venture capital investors are also very important to founders because they contribute to the growth of early startups. Venture capital investors are not just passive investors who simply invest money in stocks such as Samsung Electronics and hope to earn profits, but active investors who are deeply involved in the growth of companies by attracting venture capital that is not provided by traditional financial institutions to invested startups, providing business loans and networking to connect

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<sup>1)</sup> Kleiner Perkins was founded in 1972 and was an early identifier and investor in many Silicon Valley companies, including Amazon, Google, Netscape, Twitter, Genentech, and many others, becoming one of the two most prestigious venture capital firms in Silicon Valley alongside Sequoia Capital.

<sup>2)</sup> Kortum and Lerner (2001), Samila and Sorenson (2011).

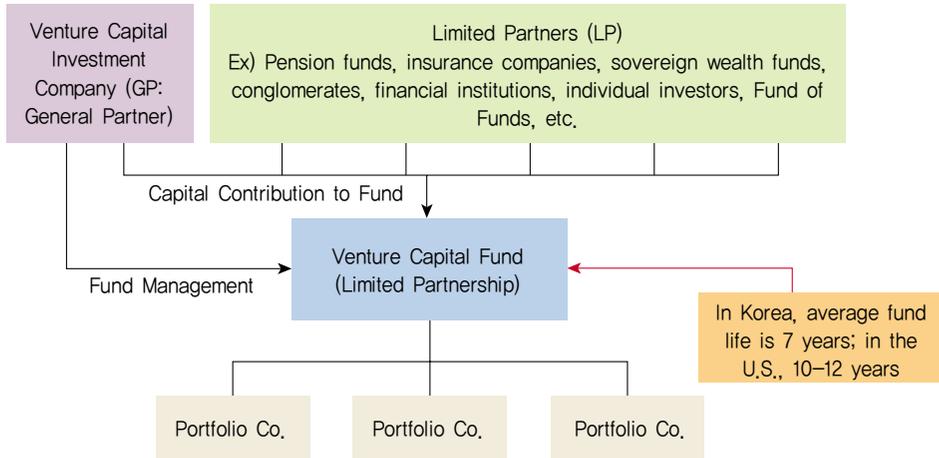
professional management advice and human resources so that the enterprise value of the investee company can increase. Therefore, venture capital investors receive equity in the investee company in return for both the value-added role and the amount of venture capital invested.

However, venture capitalists vary in their ability to add value, so for a startup, the amount of money you receive may be even more important than who you receive it from. Being selected by a well-known and highly qualified investor is a good signal to the market, like being admitted to a prestigious university. As VC investors become more specialized and sophisticated, their role in sustained economic growth and social development will become increasingly important.

### Venture Capital Funds

Venture capital as we know it today is almost entirely organized around the creation of venture capital funds and the management of those funds by venture capital investment firms. VC firms may manage multiple funds simultaneously. As shown in [Figure 3-1], a venture capital fund (blue) is composed of LPs (limited partners), who are investors who contribute money to the fund, including institutional investors, and (GPs) (general partners), who are specialized investors in venture capital investment firms (purple), who manage the fund for a period of time, identify and screen promising investee companies (gray), and make equity investments.

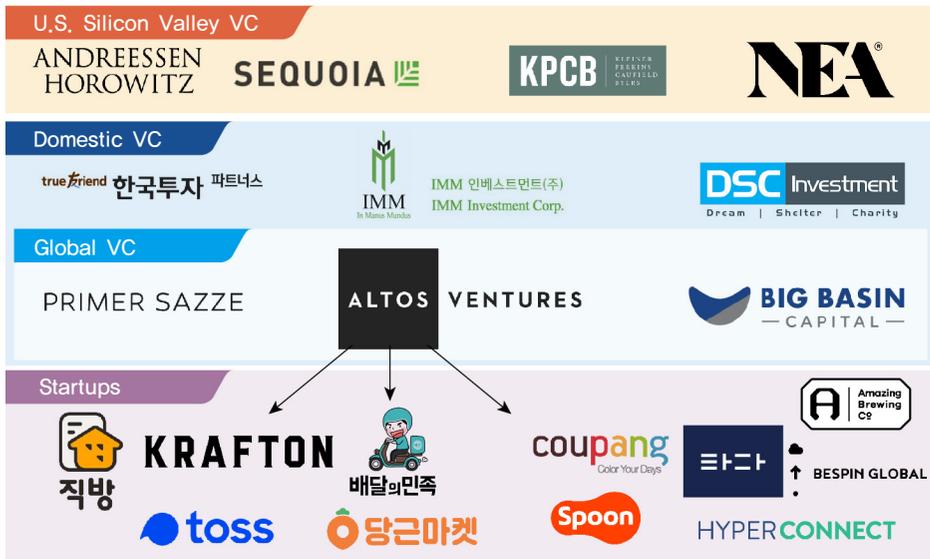
Venture capital funds have an average maturity of 10–12 years in the United States and approximately 7 years in Korea. Before the maturity of the fund, the VC firm will liquidate its stake in the investee company to receive management fees (usually 1–2% of the total fund) and performance fees (about 20% of the remaining investment income, subject to the principal and benchmark return), and distribute the principal and remaining income to the LPs. From a venture capital investor's point of view, it is called an exit when the investment that

**Figure 3-1** Typical Structure of a Venture Capital Fund

has been tied up for many years is converted back into cash through equity securitization, and there are two ways to do so: selling equity in the stock market when the investee company goes public through an initial public offering (IPO), and selling the investee company itself to liquidate equity through M&A. IPO is usually a more successful exit than M&A in terms of returns. And if a venture capital fund invests in, say, 10 startups, it is generally expected that 1~ two of them will be “big hits” (IPO), 2~ three will be “middling” (M&A), and more than half of them will be “busts” (closed and liquidated). That’s why venture capital investing is high-risk, high-reward.

In the United States, venture capital funds are funded by a variety of investors, including pension funds, financial institutions, insurance companies, university endowments, nonprofit operating funds, fund-of-funds, family offices, and sovereign wealth funds. Fund-of-funds investors are limited liability investors who are only liable for the amount of money they invest, and are passive investors who purely invest and receive returns. In Korea, in addition to pension funds, fund-of-funds with policy funds from Korea Venture Investment Corporation (KVIC) or Korea Growth Finance (K-Growth) are the

Figure 3-2 Examples of Domestic / Global Venture Capital Firms &amp; Startup Investments



largest LPs. Therefore, Korea has been characterized by a government-led venture capital market rather than a private sector-led one.

[Figure 3-2] shows an example of U.S. and Korean venture capital investment firms and their investee companies. Silicon Valley's venture capital firms are relatively old, with decades of experience, trillions of assets under management (AUM), and global business networks. Many Silicon Valley venture capital firms invest globally, including Sequoia Capital and Kleiner Perkins, which are known for their early-stage investments in and growth of many of the world's most recognizable companies, including Intel, Apple, Cisco, Google, PayPal, YouTube, Instagram, LinkedIn, WhatsApp, and Zoom.

In Korea, indigenous firms include IMM Investment, DSC Investment, and Korea Investment Partners, and since the 2010s, global venture capital firms such as Altos Ventures, Primer Sazze Partners, and Big Basin Capital, founded by Korean-Americans in Silicon Valley, have also emerged. They are

funded by US and international LPs and are active in Korea, investing in Korean startups. For example, Altos Ventures is known for investing in well-known companies such as Coupang, Baedal Minjok, Krafton, Tada, Danggeun Market, Toss, and Zigbang, and providing Silicon Valley-style management advice and networking, contributing to the growth of most Korean unicorns<sup>3)</sup> and playing a large role in the overseas expansion of Korean startups. In that sense, Altos Ventures can be considered a milestone in the development of the domestic startup ecosystem.

### Venture Capital along the Startup Lifecycle

The life cycle of a startup can be roughly divided into the idea generation phase, the founding and startup phase, the growth and scaleup phase, and the post-initial public offering phase, with specialized venture financing for each phase. While venture capital firms can invest in any stage of a privately held company, the startup and scaleup stages are the most common. Investments are usually made in stages with alphabetical names, such as seed, Series A, B, and C. These are terms that have been adopted from Silicon Valley practices. Since the seed stage is the idea generation stage where it is difficult to evaluate the company's valuation, and the stage of creating a beta version or prototype of the product, the concept of business seed money is mainly suitable for startup finance such as incubator, accelerator (AC), crowdfunding, and angel<sup>4)</sup> funding rather than venture capital

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<sup>3)</sup> Privately held companies with an enterprise value of more than \$1 billion USD are called unicorns. The term began to be used in the startup ecosystem in the early 2010s, when it was used to refer to something as elusive and rare as a unicorn, an imaginary animal of legend.

<sup>4)</sup> In the United States, angels are called "angels" because they appear like "angels" in the most difficult times of a startup and provide the necessary funding. The difference is that angel investments are made by individuals with their own money, while VCs invest with other people's money (LPs). Therefore, VCs, who are institutional investors, usually have much larger investment units than angels.

investment. After that, there comes a stage when a company passes the very early stage, launches a product to the market, receives its first valuation from a venture capital firm, and receives equity investment, which can be considered a Series A investment. Series B, C, D, and so on are used to refer to additional equity investments from venture capital firms as the business expands.

As a startup grows, multiple rounds of equity investments are made, and if the company grows well enough to IPO, the founders are often left with less than 10% equity due to dilution. However, as the company value grows 10x, 100x, or even more, the founder sees it as beneficial to continue to receive outside equity investment despite the dilution. In Korea, as in the U.S., traditional venture capital firms invest heavily in the Series A and B stages, and in the Series C and D stages, when the company enters the scale-up stage, which requires a larger amount of capital, private equity firms and asset managers with large assets under management often invest in addition to venture capital firms. Of course, when the investment amount is large, it is also common for multiple VC firms to come together and invest jointly (syndication).

### Legal Types of Venture Capital Firms

The types of venture capital firms in Korea are as shown in [Table 3-1]. In Korea, there are three types of companies: **Changtusa** (short for “small and medium-sized business startup investment company”), **Shingisa** (short for “new technology business finance company”), and **LLC** (limited liability company). The Ministry of SMEs and Startups has jurisdiction over both joint-stock companies and LLCs, while the Financial Services Commission has jurisdiction over Shingisa. LLC-type venture capital firms are much more common in Korea than joint-stock venture firms because they have been subject to constraints such as burdensome establishment requirements, restrictions on LP fundraising,

| Table 3-1 | 국내 벤처캐피탈 회사의 유형

Category	SME Startup Investment Company (Founding Investment Company)	New Technology Business Finance Company (New Technology Investment Company)	Limited Liability Company (LLC-Type Investment Company)
Official Name	SME Startup Investment Company	<ul style="list-style-type: none"> <li>New Technology Business Operator (Management)</li> <li>New Technology Business Finance Company (New Tech Company)</li> </ul>	Limited Liability Company
Legal Basis	SME Startup Support Act (referred to as "Startup Support Act")	Specialized Credit Finance Business Act (referred to as "Specialized Credit Finance Act")	Act on Venture Investment (referred to as "Venture Investment Act")
Supervisory Authority	Ministry of SMEs and Startups	Financial Services Commission	Ministry of SMEs and Startups
Establishment Requirements	<ul style="list-style-type: none"> <li>Commercial company (stock company)</li> <li>Capital: 2 billion KRW</li> <li>Professional manpower: 2 or more persons</li> </ul>	<ul style="list-style-type: none"> <li>Commercial company (stock company)</li> <li>Capital: 20 billion KRW (for new technology business finance company, minimum 10 billion KRW)</li> </ul>	<ul style="list-style-type: none"> <li>Commercial company (limited liability company)</li> <li>No capital requirement (at least 1% stake in the fund required)</li> <li>3 or more people with investment-related experience</li> </ul>
Operable Funds	Venture investment associations	<ul style="list-style-type: none"> <li>Venture investment associations</li> <li>New technology business investment associations</li> </ul>	Venture investment associations
Related Organizations (Associations)	Korea Venture Capital Association (KVCA)	Specialized Credit Finance Association (Specialized Credit Finance Business Association)	Korea Venture Capital Association (KVCA)
Average Investment Amount	Average 1 to 3 billion KRW	Average 1 to 3 billion KRW	Average 1 to 3 billion KRW
Number of Registered Companies (as of 2021)	197 companies	18 companies (related to venture capital)	40 companies

Source: Ministry of SMEs and Startups, Korea Venture Capital Association

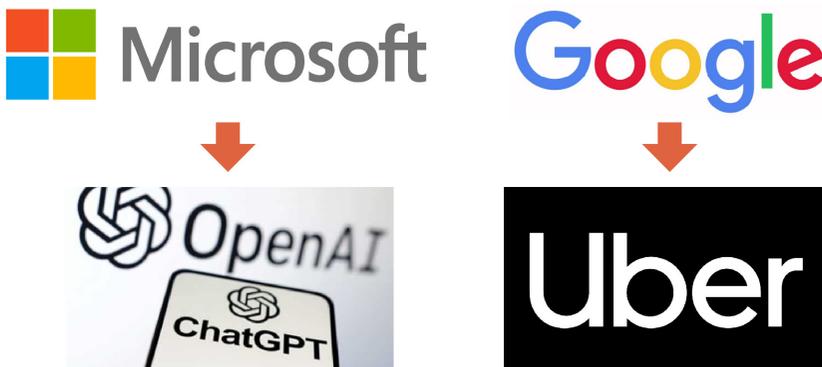
and the ability to go public. However, as the restrictions are gradually lifted, the number of LLC-type venture capital firms is expected to increase. In the United States, the LLC type of venture capital investment company is more common due to its lower tax burden. By the way, the Venture Investment Act was amended in 2023, and the term 'window investor' has now been changed to "venture investment company."

## 2 Overview of Corporate Venture Capital

Corporate venture capital, a type of venture capital, refers to equity investment in startups by existing (large) companies. Corporate VC investments are similar to venture capital investments, which are purely financial investments, but unlike venture capital investments, corporate VC investments are strategic investments that consider synergies with the existing business of the parent company in addition to seeking financial returns.

Rather than equity financing, it's best to view VC investments as part of an open innovation strategy that invests in innovation in the startup ecosystem. For example, Microsoft's 2019 equity investment in OpenAI, the developer of ChatGPT, is a good example of a strategic investment, provided funding agreement to use Microsoft's massive cloud computing capabilities for AI machine. Google has been a strategic investor in Uber since 2013, and the integration of Google Maps and the Uber app is another example of a strategic VC investment. [Figure 3-3] shows examples of Microsoft's and Google's VC investments.

Figure 3-3 Examples of Corporate Venture Capital Investments by Microsoft and Google



Unlike venture capitalists, corporate VCs can provide startups with the manufacturing, distribution capabilities and other complementary assets of their parent companies and often do not raise funds with fixed maturities, making them particularly suitable for investing in startups in the manufacturing, drug discovery, and deep tech<sup>5)</sup> sectors that require a long development period or access to the global distribution networks of large companies. Therefore, in addition to venture capital, the startup ecosystem should also have a variety of strategic investors such as corporate venture capital from global companies at home and abroad, so that the startup ecosystem can grow and improve its global competitiveness together. We will discuss corporate VCs in more detail in Chapter 6.

### 3 Development Trajectory of the Korean Venture Capital Investment Market

Currently, Korea's venture capital investment market is ranked 6th in the world in 2022, as shown in [Figure 3-4].<sup>6)</sup> A country ranked 12th in terms of GDP in 2022 is ranked 6th in terms of venture capital investment, which

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<sup>5)</sup> These are typically R&D-intensive businesses that require a large number of PhD-level employees.

<sup>6)</sup> The size of venture capital investments may vary depending on the source. For example, it may vary depending on whether it is based on the amount of venture capital funds raised by LPs or the amount of venture capital investments made by GPs to invest in investee companies. In addition, in Korea, the size of venture capital investments may vary depending on whether the Ministry of SMEs and Startups data is used, which focuses on venture capitalists, or the Financial Services Commission data, which includes private equity funds and new investors. Therefore, the need to systematically collect domestic data in one place and build a unified database seems urgent. However, since this paragraph does not focus on the exact number of venture capital investments, but only on the ranking between countries, the data in Figure 3-4 is cited for contextual purposes.

**Figure 3-4** Country Rankings by Venture Capital Investment Volume

Country	2022	2021	2020	2019	2018
 USA	\$245B	\$364B	\$175B	\$156B	\$149B
 China	\$61B	\$84B	\$61B	\$65B	\$108B
 UK	\$31B	\$41B	\$17B	\$18B	\$12B
 India	\$25B	\$43B	\$15B	\$17B	\$13B
 France	\$16B	\$14B	\$6B	\$6B	\$5B
 South Korea	\$15B	\$16B	\$5B	\$5B	\$5B
 Germany	\$12B	\$21B	\$7B	\$9B	\$6B
 Canada	\$11B	\$16B	\$6B	\$7B	\$5B
 Israel	\$8B	\$11B	\$5B	\$4B	\$4B
 Singapore	\$8B	\$8B	\$4B	\$5B	\$6B

Source: <https://dealroom.co/>

is not a bad performance for an investment market. However, by global standards, the U.S. and China are much larger, and Korea's venture capital market is still small, especially compared to the U.S., which has a long history of venture capital. There is also a lot of room for improvement compared to other countries that are lagging behind.

I think it is meaningful to look back at the history of how Korea's venture capital investment market has developed to the present, so that we can see where we need to improve and strive for in the future. If we look deeply into the Korean venture and investment market, it is difficult to describe its eventful history in detail due to space limitations, but it is possible to focus on key events in terms of the modern venture capital market. From that perspective, Korea's venture investment market can be roughly divided into the following periods, which are in line with the development of Korea's startup ecosystem as described above: the embryonic period (1980s to early 1990s), the first venture boom (late 1990s to 2000), the downturn and transition period

(2001 to early 2010s), and the second venture boom (mid-2010s to 2022).

### Early Days (1980s–Early 1990s)

The 1980–1990s was the beginning of the Korean venture investment market, when many companies related to computers, hardware equipment, and software appeared, including Sambo Computer, Hangeul Computer, Humax, and Medison.<sup>7)</sup> As mentioned in the introduction, the first venture capital investment firms such as Korea Investment Partners and SBI Investment were established, starting with an investment firm called Korea Technology Advancement Corporation (KTAC), the predecessor of Aju IB Investment Co., Ltd.<sup>8)</sup>

Korea Technology Promotion Corporation, the first venture capital investment company in Korea, was founded on September 9, 1974, with the purpose of commercializing technology by selecting research results from KIST (Korea Institute of Science and Technology) that could be commercialized.<sup>9)</sup> However, the investment companies that emerged at this time were different from venture capital as we know it today, as they were active before terms such as venture capital and angel were introduced in Korea, and before the venture capital fund or LP market was properly established.

This period can also be considered the era of personal computers (PCs), when computers were miniaturized by Microsoft, Apple, IBM, etc. in the U.S., and computers were distributed to each household, and Korea gradu-

7) [jmagazine.joins.com/forbes/view/320605](http://jmagazine.joins.com/forbes/view/320605), [jmagazine.joins.com/forbes/view/321480](http://jmagazine.joins.com/forbes/view/321480); [jmagazine.joins.com/forbes/view/321900](http://jmagazine.joins.com/forbes/view/321900)

8) Dr. Lee Min-hwa, the founder and CEO of Medison, who served as the first chairman of the Venture Business Association, wrote in his book “History of the Development of the Korean Venture Industry” (2012) that the first generation of Korean ventures “emerged in the early 1980s and overcame numerous obstacles to become a ‘model’ and ‘compass’ for younger venture companies,” and pointed to Dr. Lee Bum-chun, who “left his professorship after receiving his first degree from KAIST and founded Unix Computer” as the pioneer.

9) [HTTPS://WWW.SCIENCETIMES.CO.KR/NEWS/KIST-establishes-venture-capital-company/](https://www.sciencetimes.co.kr/news/kist-establishes-venture-capital-company/)

ally began to take an interest in venture investment as PC-related venture companies appeared. However, at that time, the venture investment market was more focused on investing in technology or providing funds to individual companies rather than the concept of venture capital funds. The professionalization of venture capital had not yet been created, and LPs had little understanding of the venture investment market.

### **The First Venture Boom (Late 1990s–2000)**

The first venture boom in the venture investment market refers to the period from the end of the 1990s, when the dot-com bubble burst in the Internet era, to about 2000, when the bubble burst.<sup>10)</sup> Venture companies that emerged at this time include Naver, Daum, NCsoft, Hangame, Gameville, and Celltrion, and venture capital firms include LB Investment, IMM Investment, Stick Investment, and Mirae Asset Venture Investment. At that time, the founders and employees of domestic venture capital firms were often from securities firms, accounting firms, and other financial firms. Therefore, domestic venture capital firms did not have a strong understanding of technology or management advisory capabilities for early-stage company establishment and growth strategies. They invested in ventures solely from a financial perspective.<sup>11)</sup>

In addition, during the dot-com bubble in 1999-2000, when venture investment was overheated, many people made equity investments in Internet companies on a “don’t ask, don’t tell” basis. However, as the U.S. reached the peak of the dot-com bubble in March 2000 and the bubble gradually deflated, Korea’s venture investment atmosphere turned off and entered a recession.

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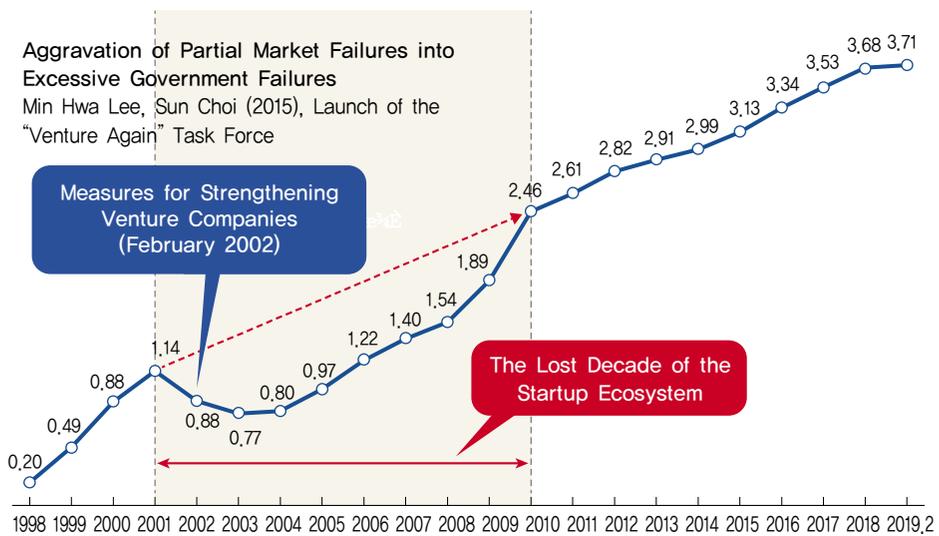
<sup>10)</sup> <https://jmagazine.joins.com/forbes/view/322303>

<sup>11)</sup> 30th Anniversary White Paper of the Korea Venture Capital Association, 2019.  
[HTTP://WEBZINE.KVCA.OR.KR/202109/?IDX=21](http://webzine.kvca.or.kr/202109/?IDX=21)

### Downturns and Transitions (2001–Early 2010s)

The downturn period of venture investment can be roughly said to be from 2001 to the mid-2000s, as shown in [Figure 3-5], and from the mid-2000s, it can be seen as a transition period where hope was seen again. In the late 2000s, when the venture bubble was bursting, the “Four Gates”,<sup>12)</sup> which were major political lobbying cases in Korea, were all directly or indirectly related to venture companies, and the perception that “venture = fraudster” was strongly spread in society. The Kim Dae-jung government, which had made fostering venture companies a major policy of the government, was also directly hit by the Four Gates, and finally, in February 2002, the “Venture Stabilization Plan” was announced, and many regulations were introduced to

**Figure 3-5 Startup Ecosystem Stagnation Through Venture Registrations** (Unit: 10,000)



Source: Venture Verification Comprehensive Management System

<sup>12)</sup> Starting with the “Jung Hyun-joon Gate” in October 2000, the “Jin Seung-hyun Gate,” “Lee Yong-ho Gate,” and “Yoon Tae-shik Gate” broke out. The venture industry protested that it was a case of political lobbying by financial fraudsters impersonating ventures, not venturers, but the social atmosphere was cold.

<https://jmagazine.joins.com/forbes/view/323060>

the venture investment market. The unhealthy view of ventures continued under the Roh Moo-hyun administration, and the entire startup ecosystem was in a dark slump until the mid-2000s. To rekindle the flame of the startup ecosystem, Lee Min-hwa, then chairman of Medicine and the Venture Business Association, created the “Venture Again” 10-point agenda, a set of policy recommendations that gathered the thoughts of venture capitalists, and began to slowly change the social atmosphere by constantly communicating with the government. Chairman Lee Min-hwa once said that many of the regulations that came out of the Venture Again agenda were “partial market failures that turned into excessive government failures.”<sup>13)</sup>

### **Second Venture Boom (mid-2010s–2022)**

The second venture boom was from the mid-2010s to 2022. Unlike the first venture boom, the second venture boom did not suddenly overheat and then burst. Rather, it was a period of low interest rates following the 2008–2009 financial crisis, when equity investments in privately held companies were plentiful, and when there was a widespread global desire to find new sources of economic growth in innovative ventures following the financial crisis.

In Korea, the atmosphere of the startup ecosystem gradually improved under the Park Geun-hye administration, and continued under the Moon Jae-in administration, and it would be correct to say that the venture boom was gradually ripe throughout the 2010s. For example, the Park Geun-hye administration launched the TIPS (Tech Incubator Program for Startup Korea), an Israeli-style private investment-led technology startup support program, in 2013, which was well received by private venture capitalists. It increased the size of the government-led fund of funds and established Korea Growth Finance, which manages growth ladder funds. During the Moon Jae-in ad-

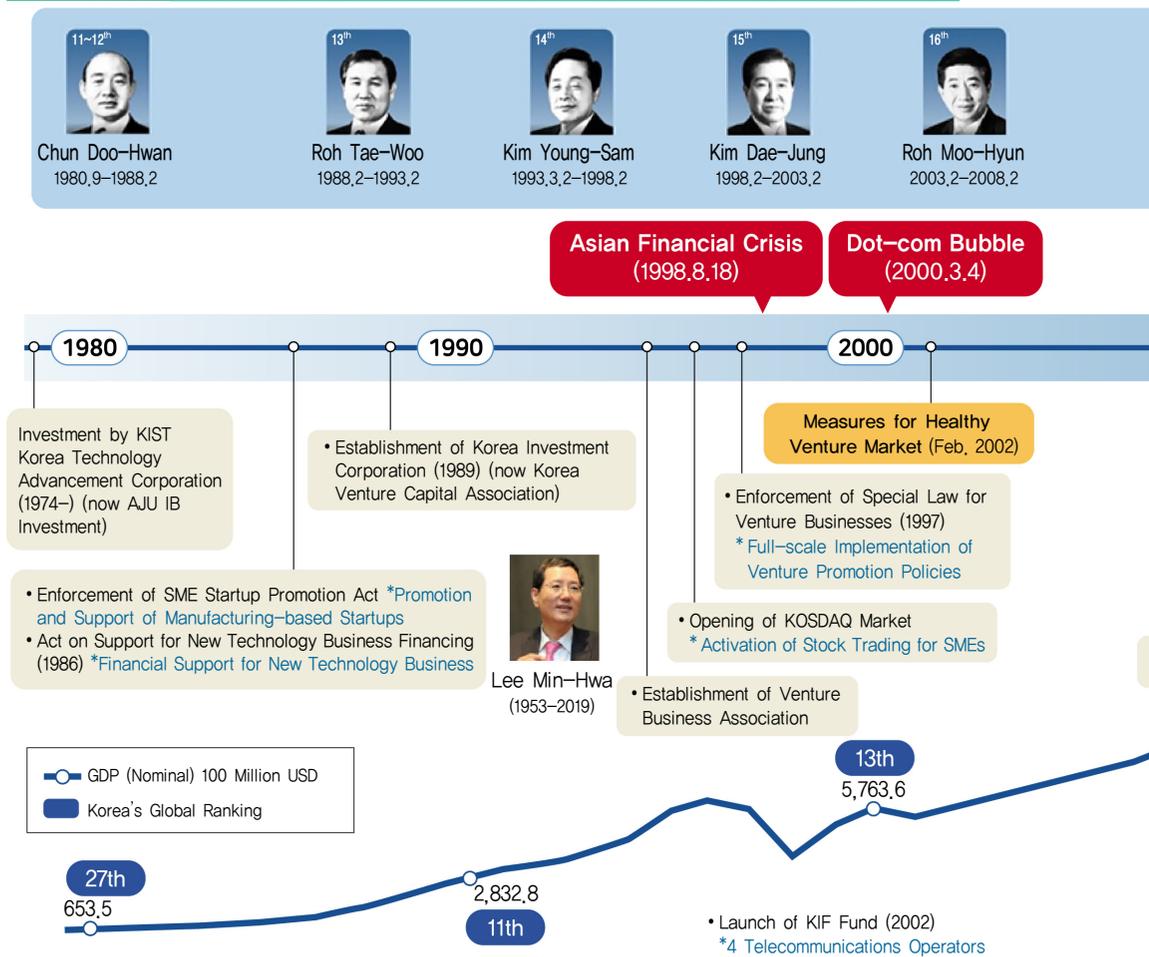
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<sup>13)</sup> Lee, Min-hwa, *the Best* (2015)

ministration, the Small and Medium Business Administration was upgraded to the Ministry of SMEs and Startups to further strengthen startup support and venture finance policies.

The second venture boom in the late 2010s was much larger than the first venture boom in the dot-com era in the late 1990s, both in terms of the number of startups and the amount of venture capital invested.

**Figure 3-6 Evolution of Korean Venture Capital and Summary of Major Regulatory Changes**



Source: Office of the President, KVCA, IMM Investment, KAIST DFMB Analysis Data

Although it was in line with the global phenomenon, the second venture boom was characterized by the fact that it was the era of digital platforms in the mobile era, and Korea was also characterized by many mobile app-related startups using 5G high-speed internet. However, the second venture boom was characterized by the fact that startups in fields other than the Internet, such as bio, semiconductors, and manufacturing, were also gaining

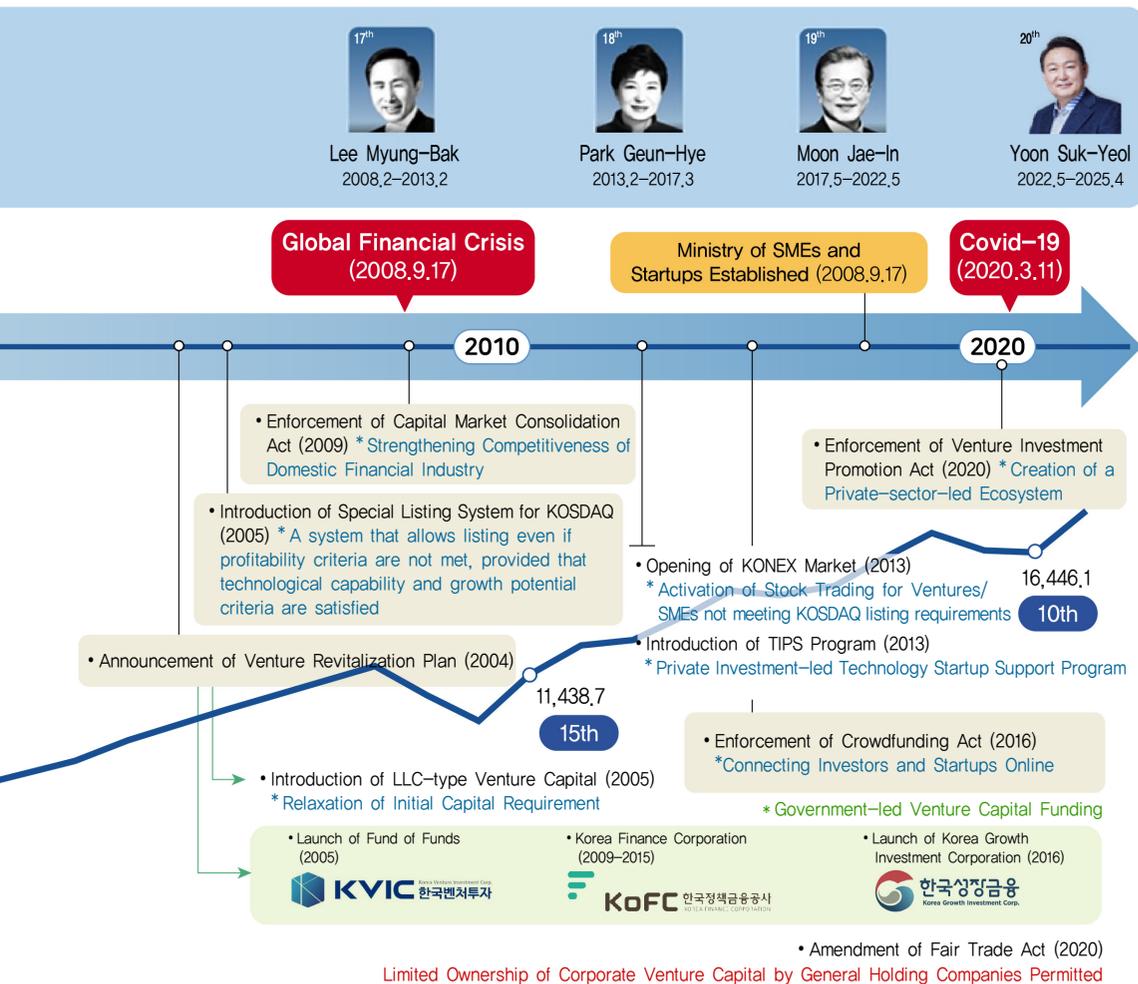
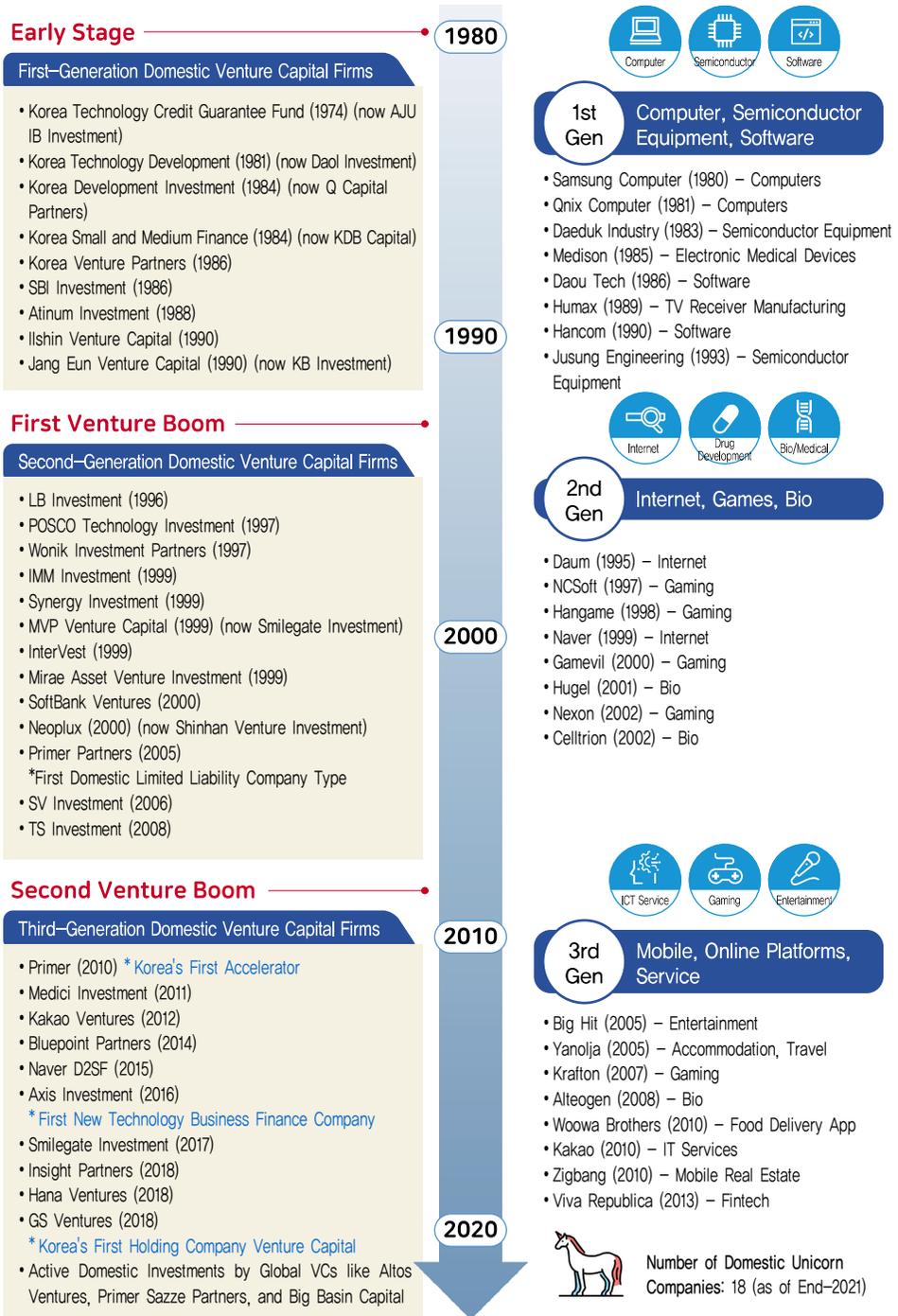


Figure 3-7 Status of Venture Capital Investment in Korea



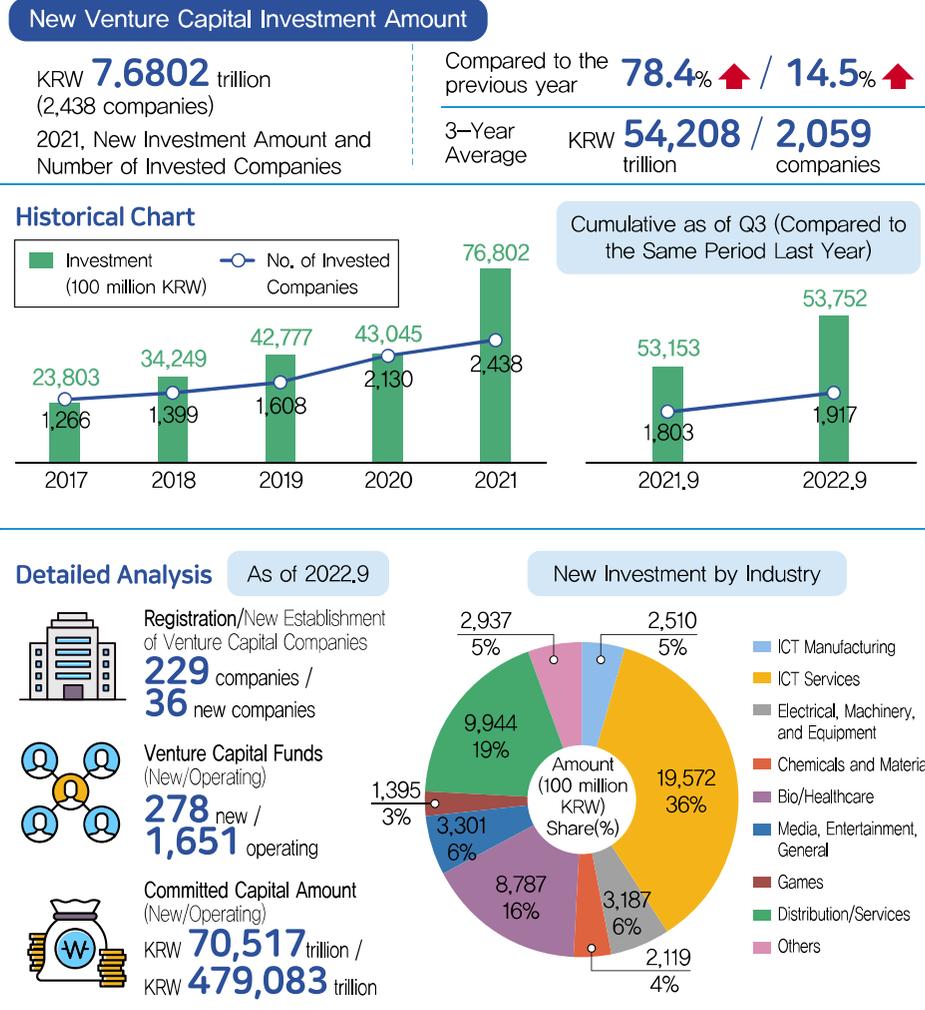
momentum, and the open innovation strategies of corporate venture capitalists and large companies began in earnest in Korea. In this process, social interest in the startup ecosystem naturally increased, and the image of startups improved as they were mentioned in the media. For example, in the 2010s, Kakao's rapid growth story, Baedal Minjok CEO Kim Bong-jin's global M&A deal, Coupang CEO Kim Bum-joon's listing on the NASDAQ, and the founding stories of female founders Market Kurly CEO Kim Seul-ah and Toss CEO Lee Seung-gun were frequently mentioned in the media, giving startup founders almost celebrity status.

[Figure 3-7] summarizes representative examples of startups and venture capital firms in each generation, divided into the first generation of the startup ecosystem, the first venture boom with many second-generation startups, and the second venture boom with many third-generation startups. The characteristic of the second venture boom is that investors who studied and gained experience abroad became active in Korea. In addition, global venture capital firms such as Altos Ventures, Primer Sazze Partners, and Big Basin Capital, which were founded by Korean-Americans in Silicon Valley, became active in Korea, and the overall quality of the startup ecosystem improved. In addition, there were many cases of corporate venture capital investing in startups and founders personally investing in other junior startups. This is also open innovation from the perspective of startups. [Figure 3-6] summarizes the evolution of Korean venture capital and major institutional changes.

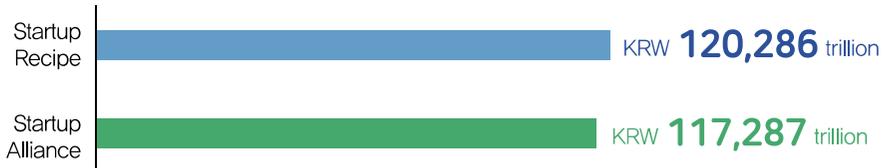
## **4** Current Landscape of the Korean Vanture Capital Market

The current state of South Korea's venture capital market is summarized in [Figure 3-8], [Figure 3-9], and [Figure 3-10], which are based on data from

**Figure 3-8 Status of Venture Capital Investment in Korea**



### Supplementary Indicators As of 2021

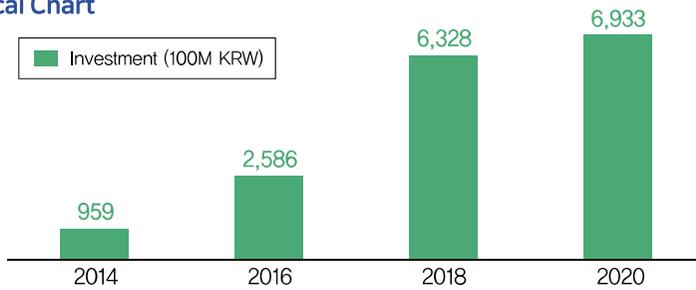


Source: Science and Technology Policy Institute (STEPI)

**Figure 3-9** Status of Angel Investment Size in Korea



**Historical Chart**



**Supplementary Indicators**

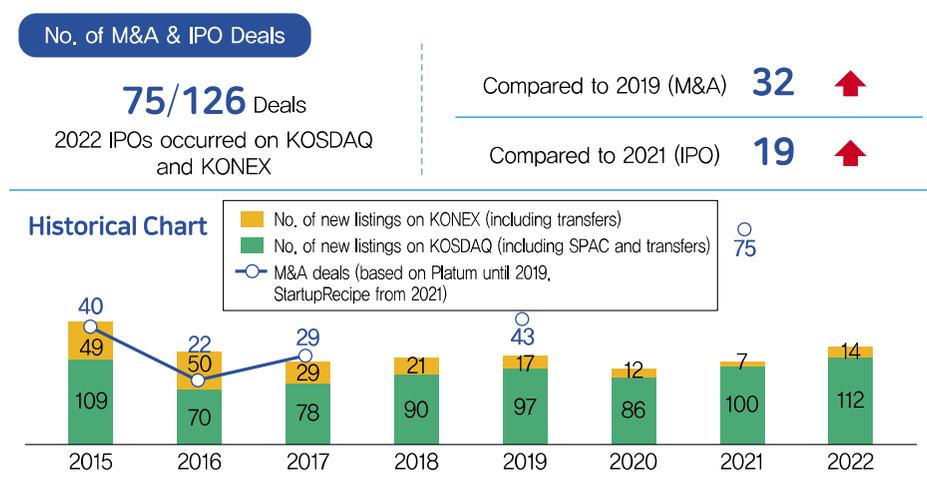
	Number of Associations	Fund Formation/ Investment Amount
Individual Investor Associations	Newly Established (2021)  <b>910</b>	 <b>6,278</b> billion KRW
	Cumulative (as of January 2023)  <b>3,245</b>	 <b>21,014</b> billion KRW

Angel Investors (as of January 10, 2023)



Source: Science and Technology Policy Institute (STEPI)

**Figure 3-10 M&A and IPO Trends in Korea**



**Detailed Analysis**

Company	Sector	Acquisition Amount	Acquirer
Hyperconnect	Video Messenger	1,933 trillion KRW	Match Group
Delivery Hero Korea	Food Delivery	800 billion KRW	GS Retail, Affinity Equity Partners, Permira
Tapas Media	Webtoon Platform	600 billion KRW	Kakao Entertainment
Radish	Web Novel Platform	500 billion KRW	Kakao Entertainment
StyleShare	Fashion Platform	300 billion KRW	Musinsa
Interpark	E-commerce	294 billion KRW	Yanolja
W Concept Korea	Fashion Platform	265 billion KRW	Shinsegae
Grip Company	Live Commerce	180 billion KRW	Kakao
Junggonara	Secondhand Marketplace	115 billion KRW	Lotte, Yuanta Securities, NH Investment & Securities
YLP (Y-Logistics Platform)	Logistics Solution	79 billion KRW	TMAP Mobility
Croquis.com (Zigzag)	Fashion Platform	Undisclosed	Kakao
Pet Friends	Pet Commerce	Undisclosed	IMM PE, GS Retail
Estmob (Send Anywhere)	File Transfer Service	Undisclosed	Rakuten
Munpia	Web Novel Platform	Undisclosed	Naver Webtoon
Millie's Library	Audiobook Service	Undisclosed	KT Studio Genie
Andar	Athleisure Brand	Undisclosed	Ecobridge Marketing
VCNC (Tada)	Mobility Platform	Undisclosed	Viva Republica (Toss)
Dr. Kitchen	Health Meal Platform	Undisclosed	Fresh Easy

Source: Science and Technology Policy Institute (STePI)

the Science and Technology Policy Institute (STEPI). Overall, South Korea's venture capital market has grown in the late 2010s, with over KRW 7 trillion in venture capital investment and over 2,400 investee companies per year, according to STEPI. Angel investment has also grown steadily, with about KRW 700 billion invested annually, and the number of M&As has also increased. The number of IPOs has also been gradually increasing since the 2020s. In other words, the Korean venture capital market has grown a lot since the mid-to-late 2010s. This is due to the global trend and the abundance of liquidity due to low interest rates.

However, the sudden increase in liquidity during the pandemic led to a steep increase in inflation, and the Federal Reserve, the central bank of the United States, raised interest rates at a rapid pace from 2022 to stabilize inflation, which froze the global money market. As a result, the venture capital market began a cold spell in 2022, and the valuation of startups was revised downward. Since it was more profitable for various pension funds to lock up their funds in high-interest bonds than to participate in the venture capital market as LPs, investment in the venture capital market declined sharply in the first half of 2023 compared to the previous year. According to data provided by Startup Alliance, the cold snap in venture investment continues as of the time of writing, with a whopping 67.2% year-over-year decline in the amount of investment raised by Korean startups in the first half of 2023. However, it remains to be seen whether the AI boom that started in early 2023 will revive the venture capital market or prolong the cold spell.

## 5 Challenges and Future Directions for Venture Capital in Korea

So, what are the future challenges for the development of the Korean venture capital market? Based on our reflection on the development process and weaknesses of the Korean venture capital market so far, we can make a few suggestions.

First, I think the government's role as a facilitator and policy support is still needed in deep tech innovation industries that require a long development period and a lot of capital, such as new drugs, life sciences, chemicals, and material/component/equipment manufacturing. These sectors are still underinvested to rely solely on the private venture capital sector, and we believe that Korea can do well in these areas compared to other countries.

Second, venture capital funds need to have longer maturities. This is so that private VCs can play their full role in the deep tech sector and the ecosystem can function well. However, the maturity of VC funds will not increase suddenly, so domestic LPs who do not want to tie up funds for many years need to be given significant tax incentives to be patient and invest for longer periods of time.

Third, in order to create a long-term venture capital fund, it is necessary to consider various incentives for LPs to enter the entrepreneurial ecosystem and invest in the fund. In particular, tax incentives for university endowments and insurance companies to participate as LPs are needed. Universities and insurance companies often don't mind locking up a portion of their assets in venture capital funds for a long period of time. In the short term, the cash flow from tuition and insurance premiums can sustain the institution. It is no secret in the global startup ecosystem that Yale University is one of the most influential LPs in Silicon Valley. By

entrusting David Swensen to manage the university's endowment from the 1980s to the present, the university has been able to grow more than 40 times while continuing to invest in the development of the university. Korea can learn from Yale's model. As mentioned earlier, the average lifespan of a venture capital fund in the U.S. is 10–12 years, while the average lifespan in Korea is 7 years. Therefore, they only invest in relatively short seven-year projects, such as mobile apps, and unicorns usually emerge only in such fields. Long-term venture capital funds can be seen as a measure of a country's patient capital, and it is easier for a venture capital fund to be long-lived when it has a wide range of LPs participating as investors. The domestic LP market is heavily dependent on government-led fund of funds or government-led pension funds, which has many limitations. Therefore, the LP market needs to become more diversified and mature.

Fourth, at the scale-up stage, there should be more venture debt, a type of financing that does not dilute equity, in addition to equity investments. Since Korea's venture capital investment is almost exclusively equity-based, the domestic venture investment market is highly sensitive and vulnerable to changes in the external market environment, such as a sharp increase in interest rates or a recession. Therefore, government support or tax incentives are needed to encourage more asset managers with the capacity to manage venture debt funds (VDFs) in addition to traditional equity-based venture capital funds (VCFs). In addition, tax incentives and other incentives for LPs to invest in VDFs need to be reviewed. If the venture loan fund market is not developed, all startups may fail in a recession, even if they can afford to cover their bases.

Fifth, policy support is needed for the creation of a variety of public and private secondary funds and private fund-of-funds to support the venture capital secondary market and strengthen the virtuous cycle of investment, recovery, and reinvestment. A secondary fund functions as a

secondary market for the VC's stake in the investee company, with the secondary fund acquiring the old company and selling it to another buyer. For the VC, it is necessary to liquidate the old company as an existing investor. Both LP and GP secondary funds are needed, and countries with well-developed secondary funds have a smoothly functioning recapitalization market because they don't have to rely on the M&A market to sell the entire investee company even if it freezes up. In Korea, SoftBank Ventures recently launched the country's first secondary fund<sup>14)</sup>, but the secondary market needs to be further expanded as it plays a complementary role to the M&A and IPO markets. In addition to government-led funds, the creation of private funds will allow the LP market to be specialized, global investment to flow into Korea, and venture capital funds to have more freedom to invest creatively. And even if the LP market freezes, the venture investment market will be less sensitive to recessions if there are more private funds.

Sixth, consider providing government policies and tax incentives for various foreign LPs and GPs to invest directly in Korea. Of course, money from overseas is important, but overseas investors can also build a global business network and gain more experience and knowledge. To internationalize Korea's startup ecosystem, we need to actively attract foreign VCs.

Finally, for an accurate understanding of the venture investment market, it is necessary to build and manage a database that systematically collects and unifies data on startups, venture capital, corporate venture capital, private equity, etc. from the Ministry of SMEs and Startups, Korea Growth Finance Investment Management, and the Financial Services Commission. This will reduce inaccuracies and increase the reliability of statistics on

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<sup>14)</sup> SoftBank Ventures, the first secondary fund worth 30 billion won, to "invest in companies with excellent fundamentals" [Numbers]: Naver Post (naver.com)

venture investment in Korea. A more accurate and unified database will also allow universities and government-funded research institutes in Korea to conduct higher quality research on the startup ecosystem.

## **6** Concluding Remarks

This chapter provides an overview of venture capital and corporate venture capital, the development process and current status of the Korean venture capital market, and future challenges for the future development of the venture capital market. In the early days of the venture capital market, venture capital firms were limited to pawnshop-level business capabilities, but since then, thanks to institutional improvements and policy support such as the Korea Fund of Funds and TIPS, high-quality domestic and global venture capital firms have emerged in Korea. And as the business capabilities of these VCs and the business models of startups have evolved, the startup ecosystem has expanded and specialized. Korea's venture capital investment market has grown to become the sixth largest in the world in a relatively short period of time, which is a remarkable achievement, but there is still much room for improvement. By implementing the policy recommendations in this chapter, we hope that Korea's venture capital market will grow even further and drive the development of Korea's startup ecosystem.



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## Chapter **4**

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# Co-evolution of Startups and Support Organizations

1. Startups Don't Grow in Isolation
2. Enabling Survival and Growth: The Role of Support Organizations in the Ecosystem
3. Benchmark Cases: Successful Startup Support Organizations
4. Evolution of Support Organizations in Korea's Startup Ecosystem
5. The Future of Startup Support Organizations
6. Co-Evolution in the Startup Ecosystem: Startups and Their Enabling Infrastructure

## 1 Startups Don't Grow in Isolation

Behind the unicorns Dropbox and Airbnb was an accelerator called Y Combinator, which systematically supported their growth. Y Combinator was founded in 2005 in Mountain View, California, as a private whose core mission is to provide money, advice, and networks to startups that have an idea but lack funding. Unlike venture capitalists (VCs) and angel investors, who typically look at numbers such as projected revenue to make their investment decisions, they invest in and support early-stage companies based solely on the potential of the business opportunity and idea.

In Korea, many private accelerators have been active in recent years.<sup>1)</sup> Primer, founded by Inicis founder Kwon Do-gyun, helped start and grow StyleShare and MyRealTrip, and Mashup Angels, founded by Lee Tae-kyung, one of the co-founders of Daum, helped fund and played a key role in opening the market for the business card management app Remember and interior one-stop platform Bucketplace.

Startup creation and growth is a dynamic process that brings together entrepreneurs, technology, funding, people, and customers, and for startups with limited resources and small funding, external help is essential in many aspects of entrepreneurial activities, including technology development, financing, market entry, and marketing. The development of a startup ecosystem depends on the presence of support organizations in the public and private sectors that help startups create and grow. In Israel, which is considered to have one of the most developed startup ecosystems, there are 27 public technology incubators across the country, including the Yozma Fund, which provides venture capital funding, and more than 100 private accelerators that support seed-stage technology-based startups in their

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<sup>1)</sup> In Korea, accelerators are called startup planners or startup agencies, and there is a registration system for startup planners in the Venture Investment Promotion Act.

growth phase and help them expand into the U.S. and other markets and attract investment.

Korea's startup ecosystem, which has a history of about 30 years, has also developed various types of public support organizations and private accelerators. In the public sector, the Institute of Production Technology established the first incubator<sup>2)</sup> in 1991 with the support of the Ministry of Trade, Industry and Energy, and KAIST established the first incubator at a university in Korea in 1994. Since then, more than 300 incubators have been established and operated by universities and local governments across the country.

In the private sector, companies whose business model is to support the growth of startups and share their achievements have emerged since the first Youngdong Incubator was established by Jungbu Industrial Consulting in 1993. In addition to the first venture boom, Korea Internet Holdings (KIH) was established in 2000, which was jointly invested by eight of the country's leading venture companies, including Medison. In the venture investment industry, accelerators have also emerged that aim to accelerate the growth of startups by providing management consulting, legal and accounting services, unlike venture capital companies that only provide funding. Although most of the private accelerators that emerged during the first venture boom failed, their business experience helped pave the way for the development of recent successful private accelerators such as Futureplay and Bluepoint Partners.

Within the ecosystem, startups and the public and private support organizations that support them are in a symbiotic relationship, mutually influencing and developing each other. This chapter examines the role of support organizations in the development of the startup ecosystem, the types of businesses, key success stories in Korea and abroad, and discusses

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<sup>2)</sup> Incubators are also called business incubators or business incubation centers.

the future of public and private support organizations in Korea.

## 2 Enabling Survival and Growth: The Role of Support Organizations in the Ecosystem

Within the startup ecosystem, there are a variety of organizations that are not directly involved in the production and sales activities of a startup, but that provide, connect, or broker the resources that a startup needs to survive and grow. [Figure 4-1] distinguishes between the types of these support organizations that operate in the public and private sectors. Non-profit public organizations include university-run incubators, central government-funded technoparks or science parks, and municipal incubators.

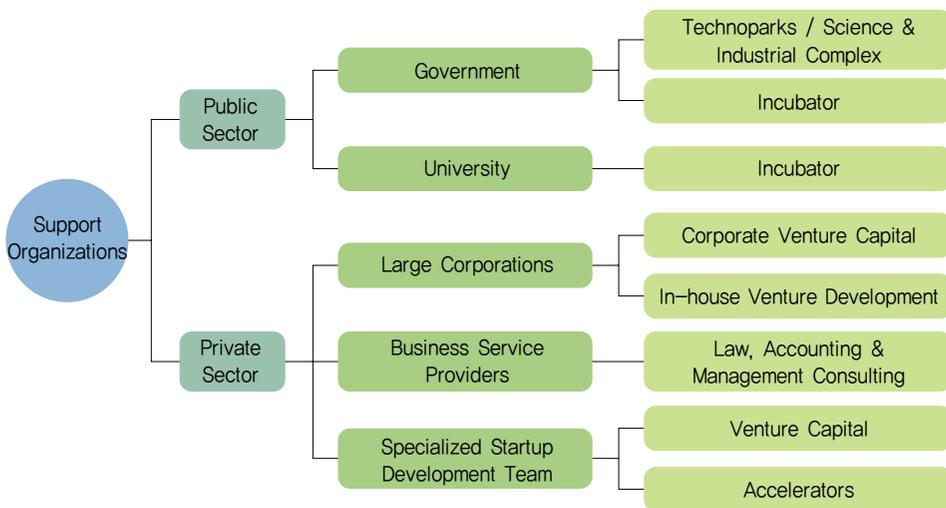
Private, for-profit organizations whose primary business purpose is to invest in and support the growth of startups include venture capitalists (VCs) and accelerators. For-profit professional services firms also play a role in the ecosystem, including law firms, accounting firms, HR consulting firms, and IT services firms. Large companies with existing businesses may also establish in-house venture development departments or corporate venture capital (CVC) organizations to fund startups and support their growth.

In this chapter, we'll focus on public sector incubators and private accelerators, which play a key role in supporting startups.<sup>3)</sup> Financial institutions, such as venture capitalists, are discussed separately in Chapter 5, and legal and accounting consulting firms are also important private support organizations, but are excluded from the discussion because

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<sup>3)</sup> Startup support facilities established by central or local governments have various names, such as technoparks, science and industrial parks, startup parks, and incubators, depending on the size and characteristics of the tenant companies, but their functions and roles as startup support organizations are largely the same.

Figure 4-1 Types of Startup Support Organizations



supporting startups is not their primary business.

Private, for-profit accelerators play three main roles in the ecosystem, helping startups increase their enterprise value and share in the fruits of their labor.<sup>4)</sup> First, they act as resource providers. They provide the human, social, physical, and financial resources that startups need to survive and grow. Specifically, it supports the growth of startups by investing small startup funds, providing office space and IT infrastructure, training and mentoring, human resource management for startup teams and key personnel, and networking with investors and partner companies through consulting programs and demo days. Second, they accelerate market validation of startups' business models. Support organizations validate startups' business models, help them attract follow-on investment, and select startups that can grow and help them enter the market. Third, the role of support for strategic decision-making. The professional managers of

<sup>4)</sup> Kim, Hee-Cheon, Kim, Do-Hyun, Lee, Jong-Hoon (2022). Accelerators: Conceptualization and future research. *Human Resource Organization Studies*, 30(3), 107-134.

an incubator act as mentors or coaches, advising founders on important decisions about markets and customers.

On the other hand, non-profit government or university incubators aim to support the growth of startups in four main areas. The first is technical support for tenants, which includes technology development, technology transfer and evaluation, design development, prototyping, and testing. The second is management support, which includes business plan preparation and feasibility review, management strategy formulation, management team, tax accounting, public relations and marketing support. The third is administrative support, which includes network support among resident and graduated companies, workspace provision and management, and office equipment support. The fourth is funding support, which includes providing information on policy funding from the government and related organizations, investor relations support for investors, and angel club information support.

Just as public healthcare differs from that provided by private hospitals, there is a big difference between the services provided to startups by public incubators and private accelerators. Private accelerators invest small amounts of money directly into startups and guide them through mentorship and acceleration programs to develop their business model and growth strategy in the direction they envision. Incubators, on the other hand, introduce startups to investors and provide business information, but they don't directly invest in the startup. This is because private accelerators aim to share the fruits of a startup's growth, while public incubators support startups but do not share in their achievements.

Meanwhile, as the startup ecosystem develops, the role of support organizations expands and the services they provide to startups become more sophisticated.<sup>5)</sup> In the early stages of a startup ecosystem's development,

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<sup>5)</sup> Tom Strodbeck & David Terry (2010, NBIA Report). StartupBrothers. Incubator functions and roles. Operating Model (reprinted from tistory.com).

public sector incubators play a leading role in supporting startups. They provide minimal physical support, such as offices, and little support for the startups' business activities. As the startup ecosystem develops, the services of public sector support organizations are expanded, and private support organizations emerge that provide richer services compared to public support organizations. In this process, advanced services such as training and mentoring for startup teams, legal and accounting services, investment support, recruitment support, marketing and sales support, business partnerships with large companies, support for global market entry, and consulting on technology development begin to be provided.

### **3** Benchmark Cases: Successful Startup Support Organizations

Before discussing how support organizations have evolved, what role they play in the Korean startup ecosystem, and how they should evolve in the future, it's worth looking at some international success stories. This is because Korean public incubators and private accelerators were started by benchmarking overseas success stories, but they have yet to achieve the same level of success.

In this section, we will look at the Israeli government-sponsored incubator as a representative success story in the public sector, and accelerators in the US as a success story in the private sector. From their development process, failures, and successes, we will explore how to successfully operate incubators and private accelerators in Korea and how the government should foster them.

### **An Example of a Government-funded Incubator in Israel**

In 1991, after the Gulf War, when private investors were reluctant to invest in startups, the Israeli government launched the TIP (Technological Incubators Program), which provides government funding for technology-based startups and incubators to support their growth. Twenty-seven universities and private incubators from across Israel participated in the program and received funding from TIP to support startups.

The TIP-funded incubators will provide \$50–80 million in funding to their selected startups, of which the incubator will provide 15% in the form of equity investment, and the remaining 85% in the form of government grants. In return, the incubator can take up to 40% of the startup's equity, and the government will pay back the money in the form of royalties of 3–5% of the startup's future sales.

The program has been successful, with 70–80 new technology-based startups launched each year through the program, and a cumulative total of more than 1,900 startups supported from 1991 to 2013. Of these, more than 560 companies are still in business and have raised a cumulative \$4 billion in follow-on investment. Some of the top private incubators include Takwin Ventures, The Kitchen, Startup Stash, Landa Labs, Contech, HIGHROAD, Sandler Investments, SUBS, and Xelera Venturing. Startups that receive early-stage support from TIP and grow out of the incubator will be supported in the Series A stage by private accelerators that help them expand into the U.S. and other international markets and raise investment, and there are more than 100 accelerators in Israel.

While the TIP program has been a successful collaboration between the government and private incubators to foster technology-based startups, it has its critics. While the government provides a large amount of money in the form of subsidies, private incubators often receive a disproportionately large stake in the startup through a small investment. Not only do private

incubators gain an unfair advantage in this process, but they also become too involved in the management of their investee companies, undermining their autonomy and competitiveness.

In response to these criticisms, the Israeli government launched the NIP (New Incubators Program) in February 2022, the second phase of the TIP. The NIP will selectively support startups that are commercializing cutting-edge technologies in five priority areas of incubation, reducing the government's subsidy to 60–85% of the total amount of funding, and reducing the amount of equity the incubator can acquire with the funds it invests to a maximum of 30%. The Israeli government plans to invest a total of \$140 million in the program in the coming years, and has selected specialized incubators to identify and support 150 startups in each of five industries.

The Kitchen Hub 2 was selected as the incubator specializing in food tech. The incubator is owned by the Strauss Group and partners with global companies and investors such as Unilever, Givaudan, Ambrosia Novozymes, and Temasek. In the climate technology sector, Netzero Ventures was selected as a specialized incubator. The incubator is partnered with DK Innovation, Total Energies Carbon Solutions, Eren Industries, IP Innovative Power, Blue Minds, BGV, OSEG Group, and others. Incentive Incubator NG was selected as an incubator specializing in healthcare, and is a consortium formed by Peregrine Ventures Capital with Bristol Myers Squibb, Becton Dickinson, Elbit, Israeli medical centers and academia. In the space technology sector, Space & Earth was selected as a specialized incubator. The incubator is a consortium of Croning, Blue Sky Capital (Samtec), Kyocera, Oceancap, Rhodium, Moon2Mars Ventures, and SpaceCom. Finally, NGT Healthcare 2 is a healthcare-specific incubator with Falcon Group, Arkin, IBI, and others.

As mentioned earlier, Israel's incubator program is a successful, albeit criticized, public-private partnership that fosters technology-based startups,

and the NIP, which is planned to be the second season of the program, offers some lessons for Korea, which has a program benchmarked on TIP.

First, global corporations and large venture capital firms are getting involved in incubator operations. Their skills, markets, and funds can be utilized to accelerate the growth of technology-based startups. Second, there are specialized incubators that specialize in each industry or technology. This specialization enables incubators to leverage the commercialization capabilities of a particular technology or industry to provide the practical help startups need to grow. Third, private incubators are using government subsidies to focus on fostering startups in the deep tech sector, especially those that commercialize technologies owned by universities and research institutes. This is because these sectors require long-term support for startups to grow, and the risk of failure is high, making it difficult for private incubators to support them alone. This is where public-private partnerships are needed to support startups. Lastly, Israeli startup support is aimed at reaching global markets and listing on NASDAQ. To this end, they involve global companies and investment institutions in their incubation programs. In Korea, one of the biggest challenges is for startups to enter the global market, and globalization of public and private startup support organizations will be a prerequisite to facilitate this.

### **The Rise, Fall, and Success of Accelerators in the U.S.**

The startup ecosystem in the United States is driven by private investment, and the role of supporting startups is centered on accelerators, which are private support organizations. The history of startup support organizations in the United States dates back to 1959. The first known incubator was the Batavia Technology Center, founded in 1959 by local resident and entrepreneur Joseph Mancuso in a converted farm equipment factory in Batavia, New York, with the goal of creating new jobs in the

eastern Rust belt. Rather than supporting high-tech startups, the center was founded and operated to help locals who had lost their jobs start their own businesses.

Private capital and entrepreneurs' attempts to support and nurture high-growth, high-tech startups emerged with the dot-com boom in the late 1990s as internet technology became more widespread. Bill Gross founded Idealab in Los Angeles in 1996, Softbank founded Hotbank in Silicon Valley, and CMGi and ICG (Internet Capital Group) became active as private incubators or accelerators. They pioneered a business model in which they provide startups with office space, IT facilities, investment funds, HR and coaching, public relations, accounting and legal services at low prices, and introduce them to alliance partners to grow their business, while taking a 30–40% stake in the startup.

These first-generation accelerators, centered in Silicon Valley in the United States, invested in highly interrelated startups and supported the creation of synergies among portfolio companies to create competitive advantage, unlike incubators that simply provide office space or venture capital that only provides investment funds. To facilitate this, they partnered with founders and provided various management resources to help them grow. To build networks between startups and established companies, they utilized external expert advice, regular meetings with related companies, exchange of outside directors among portfolio companies, alignment of interests through equity exchanges or stock option grants, and hiring specialized affiliated brokers.

Accelerators, which have come to play a different role in the startup ecosystem than traditional incubators and venture capitalists, gained media and academic attention in the late 1990s when they grew significantly with the dot-com boom. In an article published in the Harvard Business Review at the time, Harvard Business School professor Alvin Hansen characterized

the business model of the first generation of accelerators as the networked incubator model. He went on to say that networked incubators or accelerators are a new organizational model for driving new businesses that emerged after mass production organizations in the early 1900s, M-form organizations in the 1920s,<sup>6</sup> conglomerates in the 1960s, and leveraged buyouts (LBOs) and venture capital in the 1980s.<sup>7</sup> The argument is that the network incubator model of accelerators, which emerged with the IT revolution, offers economies of scale and scope that venture capital cannot provide, and provides easy access to networks and enables entrepreneurs to pursue ventures that are difficult to do within the bureaucratic structure of large companies.

One of the most successful of these first-generation accelerators was CMGi. Founded in Boston as a company that sold professors' address books to publishers, it was acquired in 1986 by an entrepreneur named Wetherell, who spent \$900,000 to start a web browser development company called BookLink Technologies as a subsidiary, which he sold in 1996 to America Online, the largest internet service provider at the time, for \$72 million, and used the money to invest in and dot-com startups. By the time the bubble burst in 2000, CMGi had invested in 70 startups, had 20 subsidiaries, and had grown to 5,000 employees, \$1.5 billion in annual revenue, and a market of \$41 billion. Its portfolio included most of the services that Google does today, including the search engine AltaVista, Engage, Lycos, GeoCities, Raging Bull, NaviSite, Furniture.com, MotherNature.com, MyWay.com, Snapfish, and Yesmail, as shown in [Figure 4-2].

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<sup>6</sup> Refers to the organization of business units due to business diversification.

<sup>7</sup> Hansen, M. T., Chesbrough, H. W., Nohria, N. & Sull, D. N. (2000). Networked incubators. *Harvard Business Review*, 78(5), 74-84.

Figure 4-2 CMGi's Startup Portfolio in 2000



However, the first generation of accelerators, which seemed to be thriving, all went under with the collapse of the NASDAQ market in 2000. CMGi, which survived the bubble burst in 2000, eventually sold all of its investment companies and exited the business in 2002 when the stock market crashed after 9-11. CMGi's failure was not only due to external factors such as the stock market crash, but also because its flagship search service, AltaVista, was losing out to Google. In the shadow of CMGi, AltaVista had less autonomy in making business strategy decisions and innovating services, and was slow to respond to rapidly changing market conditions due to its dependence on CMGi as an incubator.

Google, on the other hand, had strategic autonomy in the development and marketing of its search engine and its application services, and since it could not rely on its parent company (the accelerator) for funding, it was able to raise funds more aggressively and keep enough funds in-house. The advantages of the network incubator model that Prof. Hansen advocates were not present in CMGi and AltaVista.

The first generation of accelerators failed with the bursting of the dot-com bubble, but it wasn't the end of the road. Since the mid-2000s, second-generation accelerators such as Y Combinator, Techstars, and others have emerged in the U.S. and have played a central role in the startup ecosystem, succeeding in fostering unicorn ventures. An estimated 25-30 percent of the world's unicorns are believed to have grown with the help of an accelerator.<sup>8)</sup> Silicon Valley's successful model of private accelerators has spread globally, with more than 3,000 private accelerators in operation. Government policy makers are also actively using accelerators as a policy tool to revitalize the entrepreneurial ecosystems of regions or industries.<sup>9)</sup>

The most successful of these accelerators is Y Combinator, founded in Cambridge, Massachusetts in 2005 by Paul Graham and others. Unlike traditional venture capital, the company established the Cambridge Seed fund to make small investments, and started the Summer Founders Program for undergraduate students, selecting and investing in some of the startup teams that participated. The program has grown to include 1,000 startups per round, with 4,200 investments and a market capitalization of \$80 billion. Some of the most well-known startups that have come out of the program include Airbnb, Dropbox, Stripe, Reddit, Korea's Mimibox, and Sandbird.

The success of the second generation of accelerators can be attributed to the decline in startup costs due to the proliferation of IT infrastructure. For example, the availability of cloud IT services has made it possible for startups to develop apps and go to market for as little as \$15,000.<sup>10)</sup> Taking advantage of the hyper-connected environment that makes customer

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<sup>8)</sup> Crunchbase

<sup>9)</sup> Hochberg, Y. V. (2016). Accelerating entrepreneurs and ecosystems: The seed accelerator model. *Innovation policy and the economy*, 16(1), 25-51.

<sup>10)</sup> Kerr, W. R., Nanda, R. & Rhodes-Kropf, M. (2014). Entrepreneurship as experimentation. *Journal of Economic Perspectives*, 28(3), 25-48.

acquisition easy and customer response quick, accelerators are structuring their startup support programs to promote lean startups.

#### Support Programs Systematized by Second-Generation Accelerators

- Selection of participating companies through public and competitive evaluation
- Selection based on startup teams (not individuals), with a focus on technology-based ventures
- Sanagement of participating companies as alumni through a cohort-based system
- S election of participating companies through public and competitive evaluation (duplicated in original)
- Srovision of fixed incubation periods and intensive mentoring
- Sosting of Demo Days to attract external investment

## 4 Evolution of Support Organizations in Korea's Startup Ecosystem

The following figure [Figure 4-3] shows the year of first establishment of the major organizations in the public and private sectors that support the creation and growth of startups in Korea. It can be seen that Korea's entrepreneurship support organizations have evolved in three main phases. Phase 1 is the initial development of the startup ecosystem from 1993, when the first incubator was established, to the end of the 2000s. Public sector incubators and private angel investors were the primary startup supporters during this period. Phase 2 is the early to mid-2010s, when government and large corporations invested in startup support facilities, leading to the expansion and consolidation of startup support facilities. Phase 3 is from the mid-2010s to the present, when private, for-profit startup accelerators emerged and grew to become important organizations in the startup ecosystem.

**Figure 4-3 Establishment Timeline of Startup Support Institutions in Korea**

Public Sector	Private Sector
<ul style="list-style-type: none"> <li>• Business Incubation Center (1993)</li> <li>• Technopark (1998)</li> <li>• One-Person Creative Enterprise Support Center (2009)</li> <li>• Senior Technology Startup Center (2011)</li> <li>• Youth Startup Academy (2011)</li> <li>• Seoul Startup Hub (2011)</li> <li>• Centers for Creative Economy and Innovation (2014)</li> <li>• Ministry of Science and ICT's KIC Silicon Valley (2014)</li> <li>• University Entrepreneurship Center (2014)</li> <li>• TIPS Town (2015)</li> <li>• Makerspace (2018)</li> <li>• K-Startup Center (2019)</li> <li>• Startup Park (2020)</li> <li>• Green Startup Town (2022)</li> </ul>	<ul style="list-style-type: none"> <li>• Angel Investors (1997)</li> <li>• Banks Foundation for Young Entrepreneurs, D.CAMP / Front1 (2013)</li> <li>• Hyundai Asan Foundation, MARU180 / MARU360 (2014)</li> <li>• Startup Planners (Accelerators) (2016)</li> <li>• IBK Changgong (2017)</li> <li>• Samsung Electronics Claboutside (2018)</li> <li>• POSCO ChangeUp Ground (2020)</li> </ul>

### Phase 1: Proliferate Public Incubators

The number of incubators began to increase significantly after the Small and Medium Business Administration was established in 1996 and the government actively supported universities and local governments to establish and operate incubators to promote entrepreneurship after the 1997 IMF crisis. As of September 1999, there were 188 incubators operated by universities, research institutes, and local governments nationwide. The number has continued to grow since then, and as of the end of 2022, there are 263 incubators in operation nationwide, of which 73 are in Gyeonggi Province and 34 in Seoul. Of these, 193 incubators are run by universities, while foundations, associations, research institutes, and public institutions are the main operators. Incubators have incubated about 40,000 companies, 80 of which have gone public, and about 6,500 companies are currently being incubated by more than 600 dedicated managers.<sup>11)</sup>

While the number of incubators grew significantly with the venture

boom of the late 1990s and government support for their establishment and operation, most incubators are very small, with a single administrative staff member as a dedicated manager and fewer than 20 tenants. This makes it difficult for incubators to provide the specialized services listed above. Especially since the venture bubble burst in 2000, incubators have not been able to attract competitive startups for some time, and government support for their operation has been reduced. To play their role in the startup ecosystem, public incubators need to specialize in specific industries, grow in size, hire professional managers, and partner with private support organizations to improve the quality of services they provide to tenants. An exception is the 18 technoparks jointly established by the central government (Ministry of Industry and Energy) and the local governments themselves since 1998, which have relatively large-scale facilities and equipment, and have internalized technical support for startups that have entered the growth stage.

### **Phase 2: Scaling Up Startup Support Facilities and Engaging Private Conglomerates**

The activities of startup support organizations in both the public and private sectors, which had stagnated after the bursting of the venture bubble, began to revitalize with the establishment of a one-person creative enterprise support center in 2009, and the establishment and operation of a middle-aged technology startup center and a young entrepreneurship academy in 2011. In particular, as the Park Geun-hye administration strengthened startup and venture support policies aimed at realizing a creative economy, large and concentrated startup support organizations and facilities were created in the public sector, such as the Creative Economy Innovation Center established at the city and provincial level in 2014, TIPS Town built in Yeoksam-dong, Seoul in 2015, and Startup Park under construction since 2020.

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**11)** Incubator Promotion Fact Sheet. Korea Incubator Association. 2022.

The Youth Entrepreneurship Academy, operated by the Small and Medium Business Administration under the Ministry of SMEs and Startups, was first established in 2011 and has since expanded its programs to 18 regions nationwide, providing practical skills-based entrepreneurship education, coaching, technical support, and business expenses to 1,000 entrepreneurs every year.

Creative Economy Innovation Centers are a collaborative project between large companies and the government, with 19 centers established in 2014 in metropolitan local governments across the country to support startups and their growth. As of 2020, the centers have supported more than 8,200 startups and attracted KRW 1.9 trillion in investment to these companies. However, contrary to initial expectations, the centers have not been actively supported by large companies and are still considered to have problems with their self-sustainability and quality of services because they rely on government subsidies.

Established in 2014 in four renovated buildings in Yeoksam-dong, Seoul, TIPStown operates as a public-private partnership, with the government supporting the buildings and a private accelerator incubating tenant companies. It is home to 72 startups, including venture capital firms and professional service firms such as legal and accounting firms, and maximizes the agglomeration effect of startups by collaborating with the nearby Gangnam-gu Office's Startup Center and Hyundai Asan Foundation's Maru180 and Maru360.

Local governments, including the Seoul Metropolitan Government, have also contributed to the expansion and concentration of startup support facilities. In 2011, Seoul opened the Seoul Startup Hub in Gongdeok-dong, which houses a total of 100 startups, while Gyeonggi Province established a startup campus with 30 companies in Pangyo Techno Valley. In 2020, Daejeon TIPStown was established at Chungnam National University, where

eight investment organizations (including two TIPS operators) are supporting 28 startups.

Meanwhile, the investment of banking institutions and large corporations during the same period promoted the expansion of startup support facilities. D-Camp, the largest startup foundation in Korea, was founded in 2012 with the participation of the Korean Federation of Banks. In 2013, it opened a startup support facility near Seolleung Station with startup offices, a business lounge for meetings and conferences, and a multipurpose hall for events and seminars, and in July 2020, it opened a second facility called FrontOne in Mapo. A total of 230 startups have moved in (as of the end of 2021), with Decamp investing KRW 18.6 billion in 144 companies, and the startups that have received investment have attracted KRW 520 billion in follow-on investment. Maru180 and Maru360 are startup support facilities operated by the Asan Sharing Foundation, which aims to spread Asan Chung, Ju-yung's (the founder of Hyundai Group), "entrepreneurship" philosophy. Maru180, which opened in April 2014 near the government-run TIPStown neighborhood, and Maru360, which opened in November 2021, provide comprehensive solutions for startups, including infrastructure, networks, and education. A total of 63 startups have moved in, and around 15 new companies are selected twice a year. In addition to startups, Maru is also home to domestic and foreign venture capitalists and accelerators, including Bluepoint Partners, SparkLab, and Capstone Partners.

Yeoksam-dong, Gangnam, where TIPStown, Maru180, and located, is becoming more concentrated as POSCO built a startup support facility called ChangeUpGround in July. The seven-story, one-basement floor building is home to 21 startups in the bio, AI, energy, and medical fields. In 2021, POSCO also opened a startup support facility in Pohang with a gross floor area of 28,000m<sup>2</sup> to nurture more than 90 startups.

### **Phase 3: The Second Venture Boom and the Growth of Private Accelerators**

Like Silicon Valley in the United States, the first accelerator in Korea emerged with the first venture boom around 2000. Korea Internet Holdings (KIH), founded in 2000 by Professor Lee Min-hwa, who founded Medison, and eight publicly traded venture firms, including Medison, Dow Technology, Mirae Asset, Hangul Computer, and Saerom Technology, with a total investment of 10 billion won, aimed to discover, invest in, and nurture promising startups in the early stages of startups, and can be considered the first generation of accelerators in Korea.

E-Capital, founded in 1999 by Hong Jong-guk, a former financial executive, and Cyber Pulse Network, founded by Yoon Young-gak, a former CEO of Samjeong Accounting, are accelerators that, unlike venture capital, aim to invest in and support the growth of early-stage startups. These first-generation startup agencies did not have systematic incubation programs and were either caught up in money games or failed to secure the necessary funds for investment and incubation when the venture bubble burst shortly after their establishment. The subsequent downturn in startup creation and investment led to the disappearance of accelerators and other private venture support companies.

However, after the 2008 financial crisis, the proliferation of smartphones and mobile internet brought new opportunities. In 2010, Inicis founder Kwon Do-gyun, Daum co-founder Lee Taek-kyung, and 1 Noon founder Jang Byung-kyu founded Primer, an accelerator that aims to provide investment and mentorship to startups using funds raised through venture capital offerings. Primer has provided investment and acceleration programs to more than 230 early-stage startups through 21 batches, and has supported and succeeded a large number of startups in the second venture boom since 2017. Some of its success stories include StyleShare, MyRealTrip,

OnDemandKorea, Ideas, Rael, Quicket (operator of Bungaejangter), which exited its investment in 2013, DailyHotel, which was acquired by Yanolja, HogaengNono, which was acquired by Zigbang, and Laftel, which was acquired by Ridi.

In 2013, Lee Taek-kyung, who co-founded Primer, recruited private investors to establish Mashup Angels, an angel network-style accelerator, and became independent. Since its establishment, Mashup Angels has invested in and supported the growth of more than 130 startups in CT-based S/W, e-commerce, and IoT services. One of their most successful startups is Drama & Company, which operates Remember, a career platform based on business card management service, which became a unicorn in 2021. Other successful startups include Noom, a weight management platform, and Bucketplace, a one-stop home improvement platform.

In addition to these, accelerators founded in the early 2010s are also active, forming one of the pillars of the second venture boom that has formed since 2017. SparkLab is an accelerator founded by entrepreneurs with successful startup experiences in Korea, the U.S., China, India, and other countries, and aims to help domestic startups expand into overseas markets. Bluepoint Partners, a deep tech accelerator founded in 2014 by Plasmart founder Lee Yong-kwan with funds from the sale of his company through M&A, focuses on technology-intensive startups in the fields of components, materials, medical, bio, and healthcare. Futureplay is an accelerator founded in 2013 by Ryu Jung-hee, the founder of OlalaWorks, which was acquired by Intel, with the proceeds from the sale of the company, and aims discover and deep tech startups in the fields of robotics/autonomous driving/drones, healthcare, IT infrastructure, big data, and food tech.

In recognition of the supportive role these private accelerators play in the development of the startup ecosystem, the government has expanded its policy support for accelerators. In 2013, the Small and Medium Business

Administration introduced the TIPS (Tech Incubator Program for Startup Korea) program, benchmarked after Israel's technology venture support program TIP. Under the program, accelerators invest around 100 million won in early-stage startups (limited to 30 percent equity), and the government matches an additional 500 million won, or up to 900 million won in some cases, to fund research and development. By March 2023, 78 accelerators participated as operators and fostered 1,573 startups, with private investment of KRW 785 billion and government R&D support of KRW 593.6 billion. In 2016, the government also amended the Small and Medium Business Startup Support Act (hereinafter referred to as the Startup Support Act) to define the definition and registration requirements for accelerators and to give legally registered accelerators the right to form private investment associations, thereby expanding the activity space of private accelerators. As a result, a total of 347 accelerators were registered as of the end of 2021.

## 5 The Future of Startup Support Organizations

### Challenges for Startup Support Organizations

The second venture boom led by unicorn ventures and the public and private support organizations that helped them grow have become key players in the startup ecosystem, but the sustainability of support organizations in the startup ecosystem is still in question. While support organizations such as accelerators have been able to grow when the stock market and startups are booming, it is difficult for startup support organizations to survive and grow when investment and startups are in decline. In Korea's startup ecosystem, public and private startup support organizations need to solve the following issues for sustainable growth.

One of the structural features of Korea's startup ecosystem is that

support organizations have grown to be public sector-oriented with government support. There are more than 300 incubators and startup support facilities such as startup parks across the country, most of which have been established or subsidized by the central or local governments. Some critics argue that the overexpansion of public support organizations, which lack the capacity and expertise to support startups, has hindered the growth of private support such as accelerators. In particular, the lack of incentives for those who run public support organizations has led to a shortage of qualified support staff and a decline in the quality of startup support services they provide.

A structural problem facing accelerators and other private support organizations is that the sustainability of their business models has not yet been sufficiently proven.<sup>12)</sup> Especially in the context of the decline of venture investment, private accelerators are also finding it difficult to raise investment funds and their own operating costs. Recently, Futureplay and Bluepoint Partners, two of Korea's leading accelerators, sought to go public directly on the stock market to secure stable funding, but were put on hold because their business models were not proven to be sustainable.

The business model of private accelerators is to invest small amounts of startup capital in startups and provide them with the resources they need to grow, directly or indirectly, in order to recoup their initial investment. For this business model to be competitive, startups that receive accelerator support must be more likely to succeed or grow faster than those that do not. However, as we saw in the case of CMGi's AltaVista, accelerator support and management involvement can also make a startup less responsive and self-sustaining to market changes.

In addition, there are special problems unique to private accelerators in

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<sup>12)</sup> Köhler, R. & Baumann, O. (2016). Organizing a venture factory: company builder incubators and the case of rocket internet. Available at SSRN 2700098.

Korea. The first is that the government has introduced a registration system for startup planners and strengthened support for them, which has led to the proliferation of small-capitalization accelerators. The second is that private accelerators are highly dependent on government support programs such as TIPS, while they have a weak network of collaborations with large companies and global partners to support startups.

### **How Public Sector Startup Support Organizations Can Evolve**

Since the 1990s, when small incubators began to be set up in universities and municipalities across the country, public sector startup support organizations and facilities have increased significantly in quantity and quality in both metropolitan and rural areas. In the 2010s, public sector startup support facilities have become larger, more concentrated, and more competitive. However, there are still a number of incubators and support facilities that are small in size and lack the capabilities to support startups. Therefore, the government needs to continue to promote the expansion and professionalization of public sector startup support facilities. To this end, it is necessary to promote policies to consolidate startup support organizations and facilities scattered across the country by establishing regional bases.

On the other hand, in order to increase the competitiveness of public sector startup support organizations and facilities, it is necessary to expand collaboration with private organizations. In order to provide services that go beyond providing physical space and actually help startups grow, it is necessary to outsource the management of physical support facilities and startup support programs to private companies, including accelerators. In addition, in order to strengthen the capabilities of the support staff in public startup support organizations, they need to be fully incentivized, and the startup support system needs to be improved so that the necessary financial resources can be returned from the performance of the supported startups.

## The Future of Private Startup Support Organizations

As discussed earlier, the business model of private accelerators is vulnerable to economic fluctuations and has not proven to be self-sustaining and sustainable. In order for accelerators to continue to invest in and support startups in the face of a downturn in venture capital, they need to diversify their revenue streams to cover operating costs.

The main revenue for accelerators is the return on investment when the startups they invested in attract follow-on investment, go public on KOSDAQ, or sell their shares in an M&A process. However, these returns take at least three years to materialize, so until they do, accelerators need another source of revenue to fund their operations.

Many accelerators currently rely on the government-backed TIPS program to fund their operations, but this is not enough. There are also attempts to generate revenue by providing professional services such as tax accounting, legal, and IT services to startups, and to raise funds through stock market listings and equity offerings. Governments need to significantly loosen regulations to allow accelerators to explore revenue streams other than return on investment in startups. For example, allowing accelerators to engage in financial businesses such as real estate development and loan lending.

To become more competitive, accelerators need to expand their strategic alliances with large corporations and global partners. Strategic alliances, such as attracting investment from them or entrusting them to run startup support programs, can help accelerators secure stable operating costs. They can also leverage the technology and sales networks of their partners to accelerate startups' technology development and market entry.

Governments need to make the necessary institutional improvements and supportive policies to encourage more partnerships between accelerators and large companies. For example, it is necessary to allow venture capital firms affiliated with large corporations to invest in accelerators. It is also necessary

to expand government support for open innovation programs that are jointly promoted by large companies and accelerators.<sup>13)</sup>

Finally, in order for accelerators to accumulate and develop their own capabilities to support the growth of startups, it is necessary to specialize in a limited number of startup industries. In the U.S., accelerators specializing in digital health include Rock Health and Startup Health, and in Korea, Digital Healthcare Partners, a partnership of doctors, was established in 2016. These accelerators specialize in the medical field and provide specialized support to drug and medical device startups, such as licensing, medical insurance application, and marketing to hospitals. This specialization not only helps accelerators differentiate the support services they provide, but also expands the opportunities for collaboration and synergy among portfolio startups.

## 6 Co-Evolution in the Startup Ecosystem: Startups and Their Enabling Infrastructure

Startups that came and went during the first venture boom around 2000, such as Saerom's Dialpad, Goldbank, and I Love School, and their business models paved the way for the birth and growth of startups like KakaoTalk, Toss, and Dangeun Market. Within the ecosystem, startups evolve and develop based on the experiences of past successes and failures.

The organizations that support startups are also evolving and developing alongside them in the process of supporting startups. Incubators and other

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<sup>13)</sup> For example, Bluepoint Partners is running open innovation programs with GS Group and Hansol Group (Hansol Group - Bluepoint recruits the 4th round of open innovation 'Hansol V Frontiers' - mt.co.kr, "Energy industry gathering" ... Bluepoint opens open innovation platform - etnews.com)

public sector startup support organizations in Korea have been evolving through various experiments. Incubators at universities, which proliferated after the first venture boom, have recently been operating in conjunction with university technology holding companies to upgrade the services they provide to startups. Since the mid-2010s, public sector startup support organizations have established large-scale facilities such as TIPStown, Creative Economy Innovation Center, and Startup Park to overcome the small size of existing incubators and concentrate startups on a large scale.

In the private sector, for-profit startup support organizations have accumulated experiences of failure and success through various experiments. The incubation and acceleration business models tried by KIH, eVenture Capital, and others, along with CMGI and ICG in Silicon Valley, demonstrated their possibilities and limitations in the late 1990s and early 2000s, and their successes and failures have been inherited and developed not only by Silicon Valley's Y Combinator but also by Korea's Futureplay, Bluepoint Partners, SparkLab, and others.

It is expected that public and private startup support organizations will continue to experiment and create successful startup support models. If private organizations are able to leverage the extensive public sector startup support infrastructure, they will be able to provide more advanced services to startups and establish sustainable business models for private support organizations, including accelerators. We also expect to see new strategic alliances between startup support organizations and large corporations or venture capitalists within the ecosystem. Large-scale capital investment by large enterprises or VCs in accelerators will enable accelerators to try new things to foster startups.

The influx of a new generation of young entrepreneurs and technical talents with diverse knowledge and experience into the startup ecosystem will also change the way support organizations support startups. It is expected

that accelerators will try new support programs that provide personalized support services that the structured startup support programs established by Y Combinator cannot provide.



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## Chapter 5

# The Role of Universities in the Startup Ecosystem

1. The Changing Environment and Role of the University and Its Third Mission
2. The Orientation and Activities of Entrepreneurial Universities and University Entrepreneurship
3. University Entrepreneurship Education, Startup Support Activities, and Technology Commercialization
4. The Development and Current Status of University Entrepreneurship Ecosystems
5. The Impact of Universities on the Startup Ecosystem
6. Current Status of Korea's University Entrepreneurship Promotion Policy and Challenges for Universities
7. University Entrepreneurship and Strategies to Revitalize University-Based Startups
8. Concluding Remarks

Universities are one of the key actors in the startup ecosystem, and have traditionally performed the functions of training human resources through education and creating and disseminating new knowledge through research. However, since the late 20th century, there has been a growing social demand for universities to strengthen their role in directly contributing to the industrial and economic development of the country through technology commercialization based on research results. In response to this, some leading universities have become entrepreneurial universities, and the role of incubating organizations that foster entrepreneurs is being activated, and the function of universities as a source of human resources and technology is expanding as a platform for gathering and spreading knowledge and technology.

In this chapter, we will examine the importance of the expanded role of universities in the startup ecosystem and their relationship with other startup ecosystem actors, as well as the role and development of universities in the Korean startup ecosystem, review the current status, characteristics, and performance of universities in the Korean startup ecosystem, and discuss the challenges for Korean universities to revitalize the startup ecosystem in the future and government policies to promote them.

## **1** The Changing Environment and Role of the University and Its Third Mission

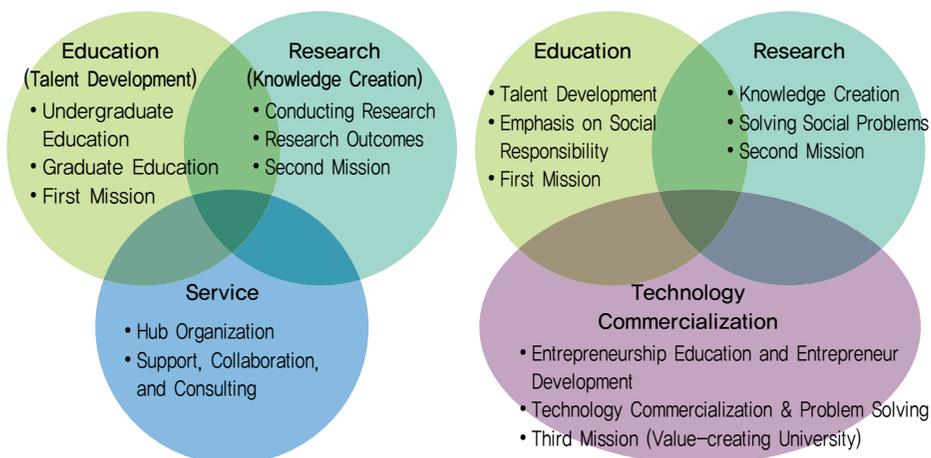
Universities have long performed the important functions of training the workforce and creating and disseminating new knowledge, and the traditional roles of universities have been perceived as education, research, and service. However, since the late 20th century, there has been a growing demand for universities to include more practical activities that create value

and contribute to society, such as technology commercialization.

On the other hand, many leading universities have joined this trend because by engaging in social problem-solving and value-creating activities in response to social needs, universities can fulfill their new mission, gain good reputation and social recognition, and earn additional financial income through technology commercialization, which can help secure important financial resources for school development.

As shown in [Figure 5-1], the role of universities is now evolving to include (1) education, (2) research, and (3) value creation through entrepreneurship and technology commercialization. Universities now have a “third mission” of creating economic and social value through technology commercialization, in addition to disseminating knowledge and fostering human resources through education (the first mission), creating knowledge and solving problems through research (the second mission), and a ‘third mission’ creating economic and social value through technology commercialization (Etzkowitz, 1983).

**Figure 5-1** Changes in the Role of Universities - The Third Mission



(a) Traditional Roles of Universities

(b) New Roles of Universities

So why is society demanding this new role for universities? Universities have always been the most important source of training excellent human resources and creating new knowledge, and they are the organizations with the most qualified human resources. However, as competition among countries based on knowledge has intensified, and the problems facing our society have become more complex and difficult to solve, society has demanded that universities go beyond the passive role of creating knowledge and technology and training excellent human resources to the active role of applying knowledge and technology to solve social problems and create economic and social value.

In response to these societal demands, some leading universities have evolved beyond the “research-oriented university” to become “entrepreneurial universities” or “entrepreneurship universities,” and a growing number are pursuing this path. [Table 5-1] shows how the role of universities has changed since the mid-19th century.

**Table 5-1 | The Changing Role of the University - Evolving to Meet the Needs of the Times**

Period	Role of Universities	
	Global Trends	Korea's Situation
Before the 19th century	<ul style="list-style-type: none"> <li>Undergraduate Four-year college education (Undergraduate)</li> <li>Focused only on education (human resource training)</li> </ul>	<ul style="list-style-type: none"> <li>No university education existed</li> </ul>
Early 20th Century (First University Reform)	<ul style="list-style-type: none"> <li>Introduction of graduate programs</li> <li>Emphasis on both education and research</li> </ul>	<ul style="list-style-type: none"> <li>Limited university education</li> </ul>
Mid-20th Century	<ul style="list-style-type: none"> <li>Emergence of research-oriented universities</li> <li>Importance of research capacity/functions</li> </ul>	<ul style="list-style-type: none"> <li>Focus on undergraduate education (research activities were insignificant)</li> </ul>
Late 20th century and later (Second University Reform)	<ul style="list-style-type: none"> <li>Emergence of entrepreneurial universities; Pursuit of education, research, and value creation (technology commercialization)</li> </ul>	<ul style="list-style-type: none"> <li>Research-oriented universities appeared; Some leading universities started to model entrepreneurial universities</li> </ul>

## 2 The Orientation and Activities of Entrepreneurial Universities and University Entrepreneurship

An entrepreneurial university is a university that aims to pursue the traditional and academic values of the university through education and research, while at the same time actively promoting the commercialization of knowledge and technology without considering it as a threat to these traditional functions to create value for the nation and society (Gibb & Hannon, 2006; Etzkowitz, 1983, Cerver Romero et al., 2020).<sup>1)</sup>

Entrepreneurial universities pursue academic excellence in teaching and research while maximizing the potential for technology commercialization. These entrepreneurial universities are active in creating value for society, while at the same time enabling the university to resource its development through increased financial income. Entrepreneurial universities can be seen as pursuing Etzkowitz's (1983) Triple Helix Model, which identifies a third mission for universities beyond teaching and research.

Representative examples of entrepreneurial universities include Stanford University, MIT, University of Pennsylvania, National University of Singapore, and Tsinghua University. In Korea, universities such as KAIST, Seoul National University, Pohang University of Science and Technology, and Hanyang University are making great efforts to become entrepreneurial universities or value creation universities.

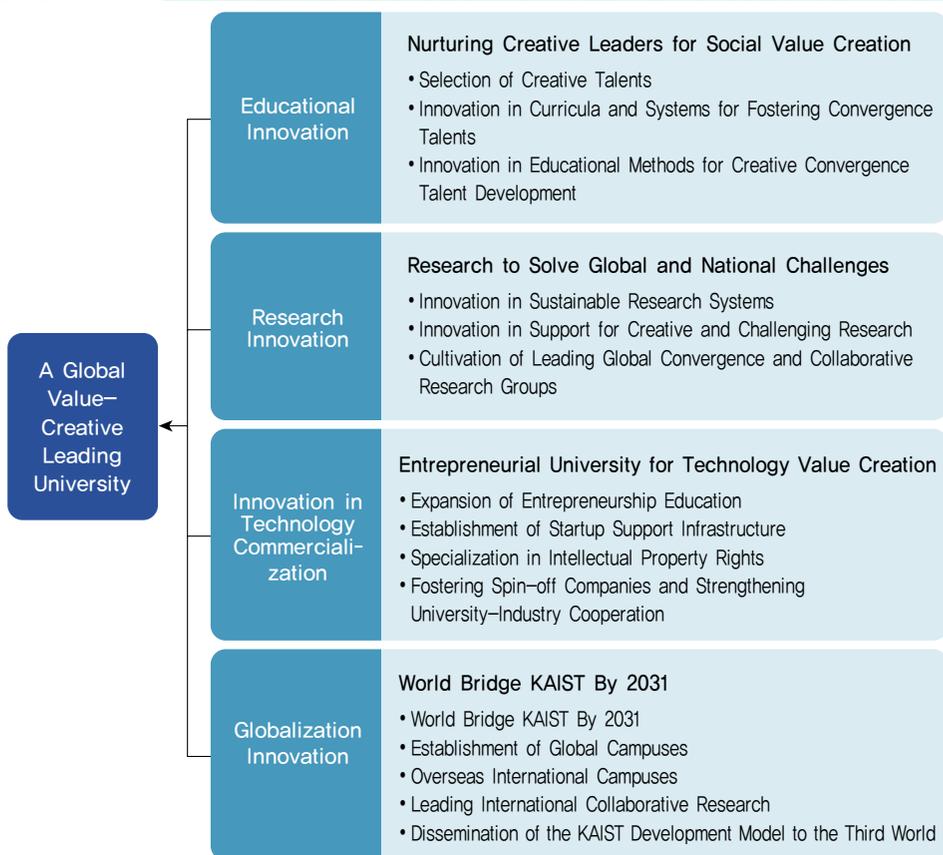
### Case 1 KAIST

KAIST's vision is to become "A Global Value-Creative Leading University." KAIST divides its future development strategy into four areas: education, research, technology commercialization, and internationalization, and

<sup>1)</sup> Entrepreneurial universities are also known as entrepreneurship universities or value-creative universities.

presents its development direction and goals. [Figure 5-2] shows KAIST’s Vision 2031.<sup>2)</sup> KAIST sees its core functions as education, research, and technology commercialization, and pursues creative talent development, excellent research performance, and impactful value creation in each of these areas, and to this end, it cooperates and expands from a global perspective.

**Figure 5-2 KAIST Vision 2031: Vision and Future Direction**



<sup>2)</sup> KAIST was founded in 1971 as a research university centered on science and technology. Its vision and plans to achieve by 2031, its 60th anniversary, are reflected in KAIST Vision 2031. <https://www.kaist.ac.kr/kr/html/kaist/010301.html>

## Case 2 Hanyang University

Hanyang University's Vision 2030 is "The best university for a better world."<sup>3)</sup> Specifically, it is "Auniversity that creates sustainable value through education and research. In addition, the three values that the university pursues are (1) education centered on student value, (2) research that creates social value, and (3) management that realizes university value. These values reflect the university's commitment to responding to changes in society and contributing to the development of the world.

Figure 5-3 Hanyang University Vision 2030



## Toward an Entrepreneurial University

Entrepreneurial universities strive to create economic value and social impact through education, research, and technology commercialization based on entrepreneurship. In other words, entrepreneurial universities focus on

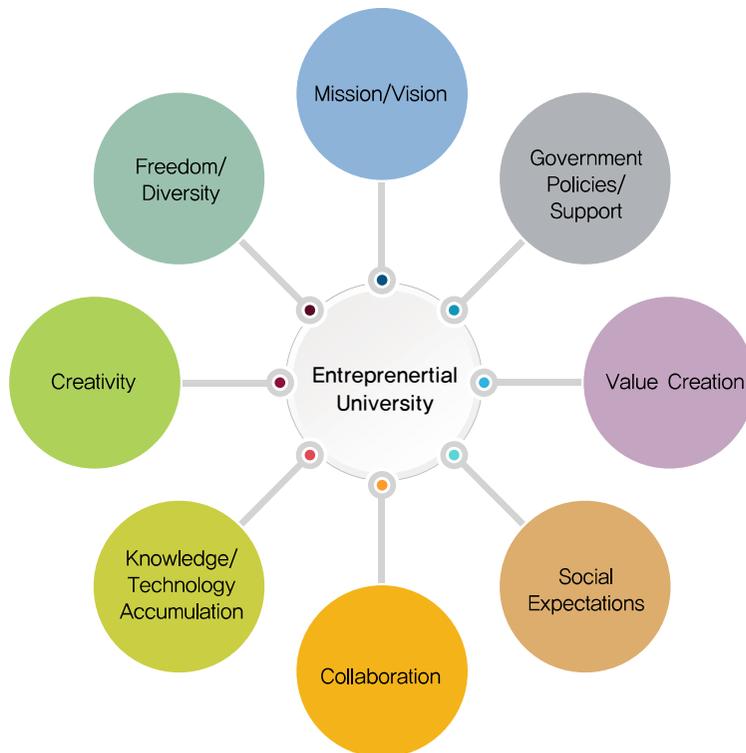
<sup>3)</sup> Hanyang University Vision 2030 website, <https://www.hanyang.ac.kr/web/www/vision>

fostering student, graduate, and faculty entrepreneurs who lead technology startups and technology commercialization, and create economic and social value along with educational and research outcomes.

Entrepreneurial universities have differentiated orientations, drivers, and activities in education, research, and technology commercialization/value creation activities than other universities. First of all, in terms of orientation, entrepreneurial universities take risks in pursuit of new opportunities based on enterprising and creativity, increase the chances of success through cooperation, and finally solve problems through innovation to create economic, environmental, and social value.

There are many more “motivations” for top universities to pursue

**Figure 5-5** Eight Key Factors Influencing the Development of Entrepreneurial Universities

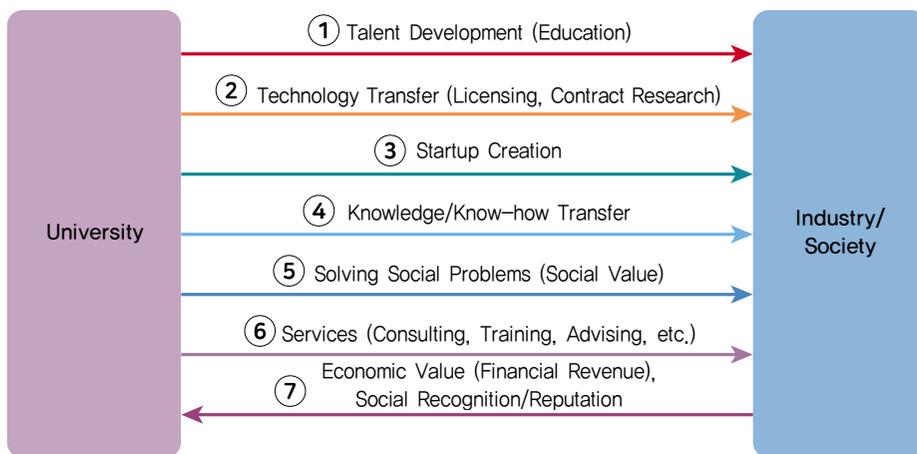


entrepreneurial universities. While society's needs are the most obvious and key driver, universities reflect and actively respond to a variety of drivers to become entrepreneurial universities. [Figure 5-4] illustrates some of the drivers of entrepreneurial universities

### Entrepreneurial Universities in Action

The main activities of an entrepreneurial university are (1) to foster entrepreneurial core talents in education, (2) to create excellent research results that can solve technical and social problems in research, and (3) to create economic and social value by successfully commercializing the results of R&D activities through start-ups, technology transfer, and licensing, and to earn economic profits for the university.

**Figure 5-5** Activities of Entrepreneurial Universities and Their Relationship with Industry/Society

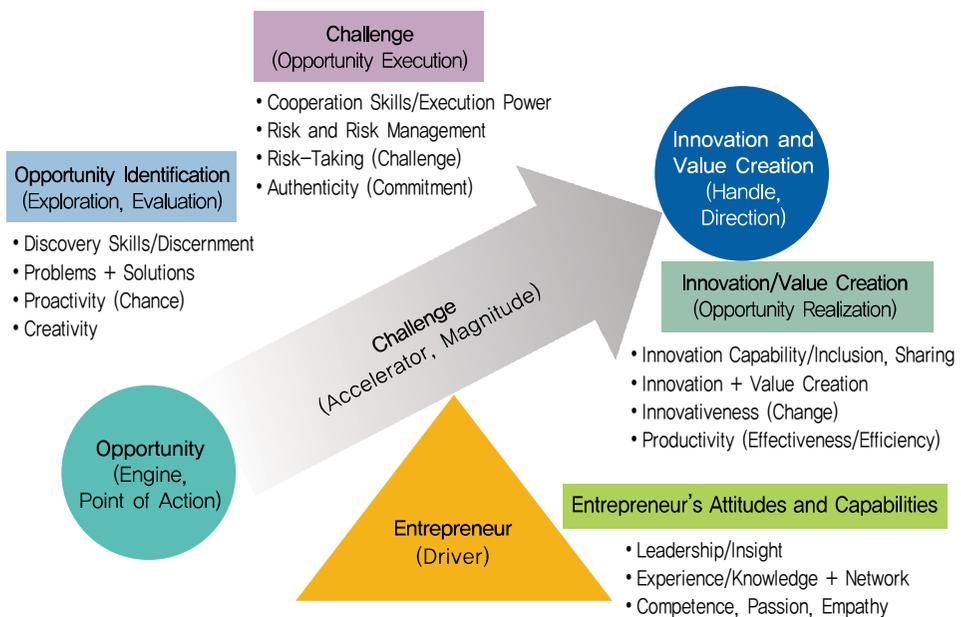


### Academic Entrepreneurship

An entrepreneurial university or entrepreneurship university is based on entrepreneurship. Professor Stevenson of Harvard University defined en-

trepreneurship as “a way of thinking and acting that (1) is not limited by current resources or capabilities, (2) seizes and pursues opportunities, and (3) is a way of thinking and acting” (Stevenson, 1983). In other words, entrepreneurship is a mindset and behavior that overcomes constraints and limitations such as resources, pursues and grasps new opportunities [challenge], and creates value by creating something new through innovation [innovation/value creation]. Therefore, the core elements of entrepreneurship can be said to be opportunity capture, challenge, innovation, and value creation, and [Figure 5-6] summarizes them.

**Figure 5-6 Core Elements of Entrepreneurship**



The three key elements of entrepreneurship - opportunity, challenge, and innovation - can be compared to the core parts of a car: engine, accelerator, and steering. Opportunity is the engine that powers the car, challenge is the

accelerator that pushes the car forward, and innovation and value creation are the steering wheel that steers the car toward the right goals and problem solutions.

The strategic willingness and behavior of an individual or organization to be enterprising and pursue new opportunities, take risks and challenges, and innovate to gain competitive advantage is called entrepreneurial orientation (EO), which includes Proactivity, Risk-Taking, and Innovativeness.

Entrepreneurial universities and entrepreneurship schools are based on the concept of academic entrepreneurship. If we apply the three EOs of entrepreneurship specifically to the context of an entrepreneurial university, we can call it Academic Entrepreneurial Orientation (AEO). AEO includes creativity, challenge and collaboration, and value creation (see [Table 5-2]).

**Table 5-2 | Core Characteristics of Academic Entrepreneurship**

Entrepreneurial Orientation (EO)	Proactivity	Risk-Taking	Innovativeness
University Entrepreneurs Orientation (AEO)	Creativity	Challenge and Collaboration	Innovation and Value Creation
AEO Activity Details	<ul style="list-style-type: none"> <li>• Knowledge/Principle Generation</li> <li>• Creative Talent</li> <li>• Creative Research achievements</li> </ul>	<ul style="list-style-type: none"> <li>• Challenge</li> <li>• Collaboration</li> <li>• Communication</li> </ul>	<ul style="list-style-type: none"> <li>• Innovation</li> <li>• Value creation</li> <li>• Inclusion/Consideration</li> </ul>

### 3 University Entrepreneurship Education, Startup Support Activities, and Technology Commercialization

#### Entrepreneurship Education and Entrepreneur Development Programs in Universities

Babson College, a U.S. institution known for its entrepreneurship education, has designed its undergraduate and graduate curriculum around entrepreneurship and entrepreneurship courses, such as [Table 5-3].

**Table 5-3 | Structure of Babson College's Entrepreneurship Education Program - Babson Build**

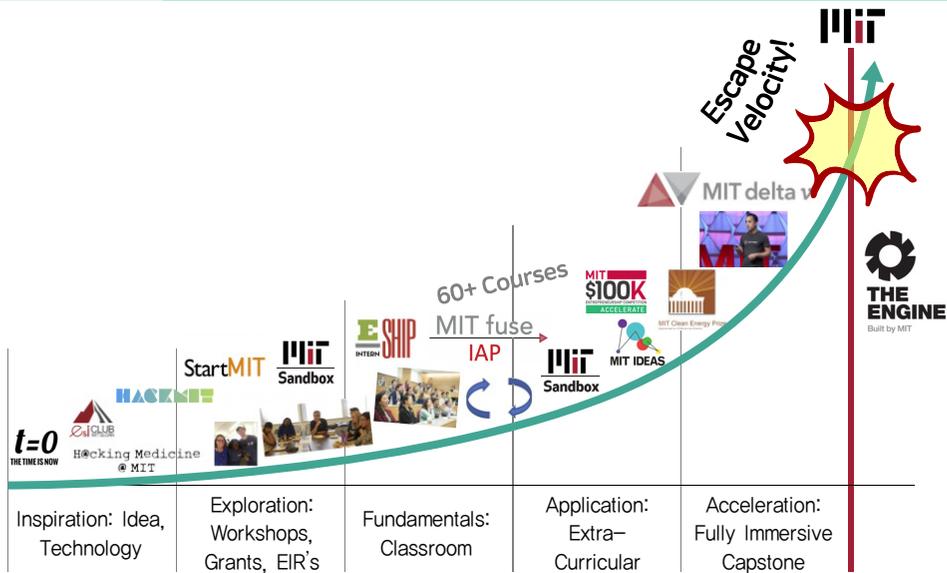
Entrepreneurship Development Program for Undergraduate Students	Entrepreneurship Development Program for Graduate Students
<ul style="list-style-type: none"> <li>• Entrepreneurial Thought &amp; Action (ETA)</li> <li>• Developing Powerful Ideas</li> <li>• Designing a Business Model</li> <li>• Marketing for Entrepreneurs</li> <li>• Raising Resources</li> <li>• Managing Growth</li> <li>• Negotiations</li> <li>• Power Pitching</li> </ul>	<ul style="list-style-type: none"> <li>• Entrepreneurial Thought &amp; Action (ETA)</li> <li>• Entrepreneurial Journey – Start to Scale to Exit</li> <li>• Innovation Dynamics and Disruption</li> <li>• Business Model Innovation</li> <li>• Growing Pains &amp; Increasing Valuation</li> <li>• Digital and Agile Marketing</li> <li>• Scaling–Up Operations &amp; Capabilities</li> <li>• Pursuing Continuous Opportunities and Securing Investment (Shark Tank)</li> </ul>

Source: Babson Build website<sup>4)</sup>, Babson College

In addition, MIT has a systematic entrepreneurship program that connects a series of events to systematically support students interested in starting a business from the time they enter the university. [Figure 5-7] shows the various entrepreneurship programs of the MIT Entrepreneurship Center, including t=0, MIT fuse, and StartMIT.

<sup>4)</sup> <https://www.babson.edu/professional/entrepreneurship-education/student-programs/babson-build/>

Figure 5-7 MIT's Entrepreneurship Support Programs



Source: Martin Trust Center for MIT Entrepreneurship website<sup>5)</sup>

### University-Based Startup Ecosystem Development and Startup Support/Nurturing Programs

KAIST operates various startup support programs centered on Startup KAIST, and the School of Business operates the Startup and Growth Support Program for Social Entrepreneurs (SAVE). In addition, other leading universities in Korea such as Hanyang University and Seoul National University have established and operate startup support systems.<sup>6)</sup>

In order to strengthen entrepreneurship and startup support at universities and promote technology commercialization, the following efforts are needed.

First, in entrepreneurship education, practical applied learning is more important than theoretical education, such as education from people with

<sup>5)</sup> <https://entrepreneurship.mit.edu/guiding-principles/>

<sup>6)</sup> Hanyang University Startup Support Center, <https://startup.hanyang.ac.kr/>

actual experience, so this should be strengthened. Second, entrepreneurship education should be divided into two parts: “Mindset” education, which is about the mindset or spirit, and “Skillset” education, which is about the expertise, approaches, management methods, and cooperation methods needed in the actual process of starting and managing a company. At Stanford University, you can often see successful entrepreneurs from Silicon Valley. One of the best ways to teach entrepreneurship is to invite entrepreneurs to speak in classrooms and share their experiences.

The second is to derive results through entrepreneurial research. Entrepreneurial research seeks to challenge and find solutions to problems in society, apply and practice solutions through various approaches, and create economic and social value as a result. It also creates new sources of income for universities and has a positive impact on society. Entrepreneurial research should result in solutions that can be applied in practice, and cooperation and timing are crucial. Of course, this doesn’t mean that universities should only do entrepreneurial research, and the traditional functions of universities, such as conducting basic research, are still important. However, entrepreneurial universities are more oriented towards entrepreneurial research. To be successful in entrepreneurial research, universities need to have the following competencies:

- Insights and discovery to capture current and future problems, needs, and opportunities
- Ability to identify problems and define them in a concrete, accessible form
- Ability to solve problems through different approaches, innovation, and R&D collaboration
- Ability to monetize research findings through commercialization

The third is the establishment of an effective technology commercializa-

tion support system. Research results can be commercialized through start-ups or technology licensing. To facilitate these activities, universities should set up incubation centers and technology licensing offices (TLOs) to help professors/students register patents based on their research achievements, or support the management and licensing of registered patents. In addition, institutional support to promote technology commercialization, such as activating the faculty startup system and granting exclusive license to university-owned patents to faculty startups, should be strengthened.

Located in the heart of Silicon Valley, Stanford University's Office of Technology Licensing (OTL) is responsible for capitalizing on the university's research by filing and prosecuting patents, promoting its patented technologies and finding partners to use them, facilitating the licensing of patents, and responding to patent infringement.<sup>7)</sup> OTL also actively supports Stanford University's connections with the startup ecosystem and helps the university generate significant revenue through licensing.

### **Technology Commercialization and Faculty Entrepreneurship Support**

Leading entrepreneurial universities have a variety of programs to support technology commercialization and work with multiple partners. In addition, it is not uncommon for professors to start their own companies based on their research in a university lab, or for professors to take a significant stake in the companies they found and provide technical advice.

Prof. Hyunmin Bae, who is currently the head of KAIST's Entrepreneurship Center, has successfully launched five startups since he studied abroad in the United States, making him a great example of faculty entrepreneurship. Two of the five startups were created through the KAIST Faculty Startup Program.

After graduating from Seoul National University with a B.S. in Electrical

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<sup>7)</sup> Stanford Office of Technology Licensing, <https://otl.stanford.edu/>

Engineering and earning his M.S. and Ph.D. degrees in Electrical and Computer Engineering from the University of Illinois, he worked at a start-up and sold the company before joining KAIST in 2009 as a professor in the Department of Electrical and Electronic Engineering.

Professor Bae first started a startup while studying abroad in the United States. He was encouraged to co-found the company by his advisor, who recognized the topic of his thesis, and led the technology development. The company was called Intersymbol, which developed the world's first semiconductor chip with digital error correction for optical communications operating at 10 Gb/s. The company was sold to Finissar in 2007.

In 2010, shortly after his arrival at KAIST, Professor Bae founded TeraSquare, the world's first commercialized 100Gb/s-class communication semiconductor chip that consumes less than 1W of power. The company, which was recognized as one of KAIST's top 10 research achievements, was sold to IDT in 2015. In 2013, he founded OBELAB, which realized the world's first portable brain imaging device using light, through KAIST's newly introduced faculty startup program.

In 2015, he founded Point2 Technology, a U.S. company that developed the world's first E-tube, a third-generation state-of-the-art cable, as a U.S. company (engineering was performed by a Korean subsidiary), and in 2021, he founded Barreleye, the world's first AI-based ultrasound imaging device that can cancer biopsy, through the faculty startup system (The Korea Economic Daily, May 25, 2023).<sup>8)</sup>

Established in 2014, KAIST Incubator is an entrepreneurship ecosystem and various entrepreneurship and startup support programs to inspire entrepreneurship and promote startups on campus and help them survive and grow.<sup>9)</sup> By 2022, KAIST had 77 faculty startups and 1,572 student startups.

<sup>8)</sup> The Korea Economic Daily, <https://www.hankyung.com/economy/article/2023052506301>.

<sup>9)</sup> KAIST Founding Institute, <https://startup.kaist.ac.kr/>

In addition to faculty and student startups, the institute also operates start-up support programs for the general public through support projects such as the Startup Incubation Center

### Designing Startup Support Systems for Entrepreneurial Universities

To successfully operate an entrepreneurial university, it is necessary to build an effective operational/support system based on components and design principles in several areas presented in Table 5-4.

**Table 5-4** Components and Design of an Entrepreneurial University's Startup Support System

Area	Key Components and Design Principles
Entrepreneurship education	<ul style="list-style-type: none"> <li>• Entrepreneurship education (undergraduate and graduate programs)</li> <li>• Development and securing of faculty members responsible for entrepreneurship education</li> </ul>
Experiential learning	<ul style="list-style-type: none"> <li>• Promotion of experiential learning and enhancement of student participation in curricula</li> <li>• Development and promotion of student-led entrepreneurship programs</li> </ul>
Startup support, incubation, and mentoring	<ul style="list-style-type: none"> <li>• Startup support, incubation, and mentoring for students</li> <li>• Commercialization of university-owned patents/technologies</li> </ul>
Entrepreneurial culture	<ul style="list-style-type: none"> <li>• Clarification of university mission/vision and sharing with stakeholders</li> <li>• Building an entrepreneurial culture that tolerates failure</li> </ul>
Startup Ecosystem and Networking	<ul style="list-style-type: none"> <li>• Strengthening cooperation with startup alumni and ecosystem stakeholders</li> <li>• Utilizing government startup support policies</li> </ul>

Sources: Chae Won Lee, Marc Meyer (2021)

## 4 The Development and Current Status of University Entrepreneurship Ecosystems

In Korea, the 1980s was a period when the R&D capabilities of private companies increased significantly and key industries began to grow in earnest. During this period, the government also made great efforts to establish technology and market-related systems and support systems for large and small companies, such as enacting the Industrial Development Act of 1986 and the SME Startup Support Act. It was also during this period that new ventures or startups, rather than regular SMEs, began to be established (Bae, Zong-tae, 2022).

Professor Lee Beom-chun left KAIST in 1983 to found Qnix Computer, and Dr. Lee Min-hwa, a graduate of KAIST, founded Medison with his lab colleagues in 1985. Since then, venture startups have been started mainly by university graduates, and venture startups expanded significantly during the venture boom in the mid-1990s. However, at this time, there were no systematic and specialized government policies or efforts by universities themselves to support students and professors to start ventures, and the university startup ecosystem was still in its infancy.

The development process of the entrepreneurship ecosystem in Korean universities can be divided into the introduction period (1980s–2000s), the foundation period (2010s), and the growth period (2020s). [Table 5-5] summarizes the main activities, organizational/institutional changes, government/university roles, and characteristics of entrepreneurship ecosystems at each stage of university entrepreneurship development.

### The Early Years (1980s–2000s)

University faculty/student entrepreneurship activities were based on the entrepreneurs' own capabilities, mutual cooperation, passion, and desperation

**Table 5-5 | Development Process of University Startup Ecosystems – Key Activities and Roles of Government/Universities**

Stage Classification	Key Activities and Organizational/Institutional Changes	Government/University Role and University Startup Ecosystem
1980s–2000s (Introduction Phase)	<ul style="list-style-type: none"> <li>• [1983] Founding of Qnix by Han–Yong Lee</li> <li>• [1985] Founding of Medison by Min–Hwa Lee</li> <li>• [1994] KAIST, Establishment of Startup Incubation Center</li> <li>• [1995] Establishment of Venture Business Association</li> <li>• [1997] Establishment of the Small and Medium Business Administration</li> <li>• [1998] Enactment of the Venture Business Special Act</li> </ul>	<ul style="list-style-type: none"> <li>• [Government] Built basic systems for venture cultivation but provided insufficient support for university startups</li> <li>• [University] Lack of active system support for graduate entrepreneurship and technology commercialization</li> <li>• [Ecosystem] University startup ecosystem remained at a nascent stage</li> </ul>
2010s (Infrastructure Formation Phase)	<ul style="list-style-type: none"> <li>• [2009] Hanyang University, Establishment of Startup Support Center</li> <li>• [2011] SMBA, Promotion of Leading Startup University Program</li> <li>• [2012] Ministry of Education, Promotion of Leading University–Industry Cooperation Program</li> <li>• [2014] Launch of KAIST Startup Institute</li> <li>• [2015] MSIT, Launch of “Korean I–Corps” Program</li> <li>• [2015] Seoul National University, Establishment of Startup Support Center</li> </ul>	<ul style="list-style-type: none"> <li>• [Government] Active support for university entrepreneurship and technology commercialization</li> <li>• [University] Increased participation in government programs, expansion of startup support</li> <li>• [Ecosystem] Multiple universities established startup centers and began operating entrepreneurship education programs; increased entrepreneurial activity among students and graduates</li> </ul>
2020s (Growth Phase)	<ul style="list-style-type: none"> <li>• [2022] SMBA, Declaration of “Startup–Centric University Vision” and Strengthened Support</li> <li>• [2022] Ministry of Education, Implementation of University Innovation Support Project</li> <li>• [2023] MSIT, Launch of “Lab Startup Support Program”</li> </ul>	<ul style="list-style-type: none"> <li>• [Government] Utilization of university infrastructure to foster regional startups and create a global startup environment</li> <li>• [University] Steady increase in student and faculty startups; efforts to foster startup–friendly campus culture</li> <li>• [Ecosystem] Quantitative and qualitative growth of the university startup ecosystem; progressing toward stable development; further strengthening of university support capabilities needed</li> </ul>

rather than government and university policy support.

### **Foundation Builder (2010s)**

From this period onward, government support for universities, led by the Ministry of SMEs and Startups, the Ministry of Science and ICT, and the Ministry of Education, gained momentum, and university entrepreneurship education and support activities were greatly expanded. In addition, the startup support activities of university startup centers have stabilized, startup education has been internalized, and the startup performance of university students and professors has gradually increased.

### **Growing Up (2020s)**

The startup ecosystems of leading universities have grown in quantity and quality, and university startup performance has increased, including student/faculty startups and technology commercialization. The government's innovation and entrepreneurship education and support projects for universities have been steadily promoted by relevant departments, and universities are also playing a role in fostering local startups using their own infrastructure.

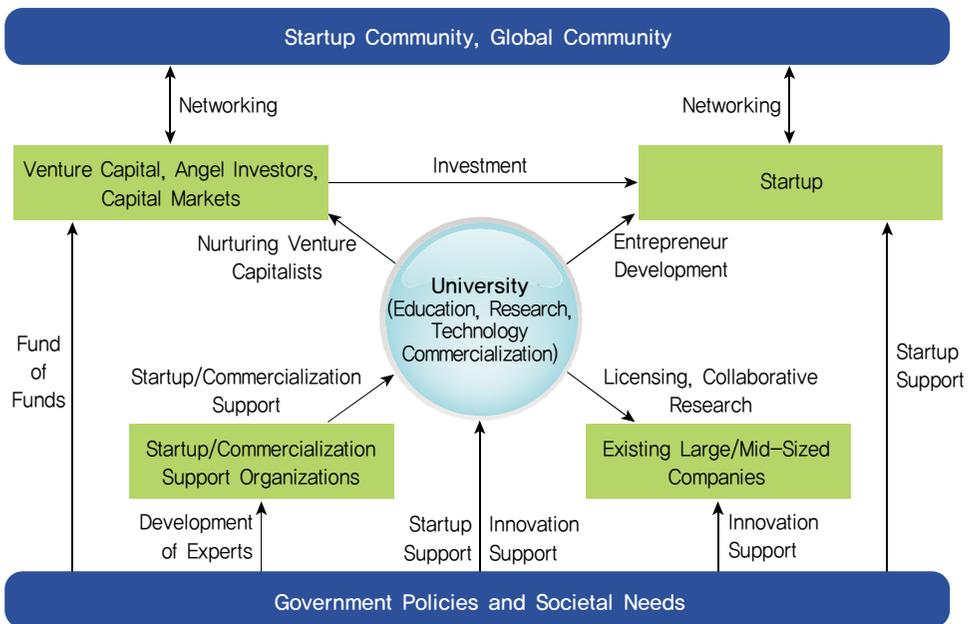
The university startup ecosystem does not exist in isolation, but cooperates with and influences other startup ecosystem actors. In Korea's startup ecosystem, university startup ecosystems are playing an increasingly important role as a source of new innovations and startups, and their impact on society is growing.

## 5 The Impact of Universities on the Startup Ecosystem

### Universities and Startup Ecosystems

Universities influence the startup ecosystem through a variety of activities, including education, research, and collaboration, as well as by promoting entrepreneurship and technology commercialization activities within the university. [Figure 5-8] summarizes the areas in which universities influence and collaborate with the startup ecosystem.

**Figure 5-8 The University's Impact on and Collaboration with the Startup Ecosystem**



### The Impact of Universities on the Startup Ecosystem

The most important role of universities for Korea's startup ecosystem is to (1) foster an entrepreneurial campus culture and effective science, technol-

ogy, and entrepreneurship education to nurture a large number of budding entrepreneurs, entrepreneurs, and venture capitalists; (2) conduct a large number of demand-driven entrepreneurial research to achieve results; and (3) promote startups through technology commercialization of research results and strengthen cooperation and licensing with existing companies. Through these activities, entrepreneurial universities can create a virtuous cycle of startup innovation and growth, and this virtuous cycle centered on universities can contribute to the development of startups and a healthy ecosystem in Korea.

## **6** Current Status of Korea's University Entrepreneurship Promotion Policy and Challenges for Universities

Since the 2010s, the Korean government has developed various policies to promote entrepreneurship education and start-ups at universities, promote technology commercialization, and support start-ups using university capabilities, and has changed its projects and systems according to the needs of the times. Representative government policy projects to foster university entrepreneurship include the Entrepreneurship Center University Project, the Laboratory Startup Support Project, and the University Creative Asset Commercialization Support (BRIDGE 3.0) Project. [Table 5-6] introduces the government's representative university startup fostering projects.

**Table 5-6 | Representative Government Programs for University Startup Development**

Project Name	Project Description
Startup-Centric University Program [SMBA]	<ul style="list-style-type: none"> <li>Startup-centric universities serve as hubs for startup activation and regional entrepreneur cultivation. The program period is 3 years, with possible 2-year extensions based on evaluation.</li> <li>The budget primarily supports startup commercialization and experimental startup commercialization, with additional funds allocated for startup program operation and organizational management at universities. The 2024 budget is 77.5 billion KRW, with 9 universities designated.</li> </ul>
Experimental Startup Support Program [MSIT]	<ul style="list-style-type: none"> <li>This program includes [1] Experimental Technology-Based Leading University Innovation Startup Program and [2] Public Market-Based Startup Exploration Support Program (Korean I-Corps model).</li> <li>In 2023, 13 universities were selected, with a total of 14.4 billion KRW supported over 2 years.</li> </ul>
University Research Commercialization Support Program [Ministry of Education]	<ul style="list-style-type: none"> <li>Under the University Research Commercialization Support (BRIDGE 3.0) Program, capable universities are selected to transfer research outcomes and commercialize technologies, enhancing the entrepreneurial role of universities to create added value from outstanding technologies.</li> <li>The Ministry of Education also promotes the 'University Innovation Support Project,' including customized education initiatives.</li> </ul>

Source: SMBA, MSIT, Ministry of Education Websites, Eduplus (<https://www.eduplusnews.com>)

### Small Business Administration

The Startup Center University Project is a representative university support program of the Ministry of SMEs and Startups (MSS). Universities utilize their startup support capabilities/infrastructure to discover and nurture local budding entrepreneurs, and MSS supports the budget required for this. In addition to the Startup Center University Project, MSS is also conducting the Early Startup Package, Startup Success Package (Youth Entrepreneurship Academy), Startup Leap Package, and Startup Growth Technology Development Project, and through these programs, startups founded by universities can receive support at each stage of growth.

### **Ministry of Science and ICT (Information and Communication Technology)**

The Laboratory-Specific Startup Leading University (Science and Technology-based Innovation Startup University) project is being implemented by the Ministry of Science and ICT (MSIT) in cooperation with the Ministry of Education and the Ministry of SMEs and Startups. MSIT is responsible for technology development, the Ministry of Education is responsible for creating a foundation for startups, and the Ministry of SMEs is responsible for commercializing startups.

### **Department of Education**

The Ministry of Education's "Support for Commercialization of University Creative Assets (BRIDGE 3.0)" project is being implemented from 2023 by expanding the first BRIDGE project (2015–2017) and the second BRIDGE project (2018–2022). It focuses on technology transfer and technology creation at universities and supports technology commercialization.

### **Central Government Ministries & Local Governments**

In addition, central government ministries such as the Ministry of Culture, Sports, and Tourism and the Ministry of the Environment, as well as local governments such as Seoul and Gyeonggi Province, are also promoting various support projects related to startup support, technological innovation, and global expansion.

On the other hand, universities pursuing entrepreneurial universities should also continue to make efforts to build an effective startup ecosystem on campus and connect with other actors in the startup ecosystem to build an ecosystem with a vision and build capabilities in various aspects such as education, research, technology commercialization, and culture to facilitate

technology startups, entrepreneurship, and technology commercialization.

## 7 University Entrepreneurship and Strategies to Revitalize University-Based Startups

Faced with rapid technological development and many social problems to solve, countries around the world are expecting universities to play a more active role in solving these problems, and social aspirations and demands are rising. In response to these demands, many entrepreneurial universities have emerged in recent years.

To revitalize university entrepreneurship and promote university-based startups, universities need to develop their own capabilities and make more efforts, and set the right direction in each area (mission, business, people, and society).

- [Mission] Entrepreneurial university: value-creating university, developing entrepreneurs/leaders
- [Business] Cooperation between entities: industry-academia-government cooperation, various startup support programs
- [People] Entrepreneurial/professional development: Nurture entrepreneurs and experts in startup education and support together
- [Social] Ecosystem: Creating a community of founders, increasing access and networking

In addition, entrepreneurial universities can promote entrepreneurship and create an entrepreneurial campus culture through the following activities and methods

- Strengthening the competence/confidence of prospective founders through science, technology, entrepreneurship, and management edu-

cation

- Inspire entrepreneurial aspirations by networking with entrepreneurial alumni, etc.
- Enhance mentoring and networking through competitions, college entrepreneurship camps, and more
- Strengthening the capacity of entrepreneurship support organizations to provide a range of entrepreneurial support
- Strengthening international partnerships to support startups' global reach

### **How to Spread Entrepreneurial Universities, Cultivate Entrepreneurial Students, and Promote Entrepreneurial Research and Commercialization**

In order to grow entrepreneurial universities, develop entrepreneurial students, and ensure that they become entrepreneurs in the future, we believe the following efforts will be necessary

- Encouraging and incentivizing universities for the pursuit of becoming entrepreneurial universities
- Research, build and scale an entrepreneurial university system suitable for Korea.
- Encourage faculty entrepreneurship and establish/operate a support system for faculty entrepreneurs
- Create students who ask questions and find problems, not just solve the problems given to them
- Create a campus culture that inspires dreams, challenges, and entrepreneurship
- Put first professors and students with entrepreneurial mindsets and skillsets
- Secure educational programs, pedagogy, and faculty that empower stu-

dents' entrepreneurial skills

- Increase collaboration between universities and startup ecosystem actors
- Spreading and disseminating success stories of entrepreneurial universities (establishing the K-Entrepreneurship University model)
- Government policies boosting support for entrepreneurial universities and fostering collaboration between universities

## 8 Concluding Remarks

In this chapter, we looked at the new role of universities and the importance of their technology commercialization mission, the goals and activities of entrepreneurial universities, the development process and current status of the university startup ecosystem, and government policies and measures to develop the university startup ecosystem. To develop the university entrepreneurship ecosystem and promote university entrepreneurship, it is important for various key actors in the startup ecosystem to cooperate, but above all, universities need to create an entrepreneurship-friendly campus culture and further develop their technology commercialization and entrepreneurship support capabilities.

To foster an entrepreneurship ecosystem in universities, systematic and continuous efforts are needed, including (1) creating a university culture that gives students the desire to become entrepreneurs (Heart), (2) training entrepreneurial attitudes/mindset and accumulating knowledge/experience through entrepreneurship education (Head), (3) providing various opportunities to experience entrepreneurial practice through inviting entrepreneurs (Hands), and (4) strengthening networking through connecting seniors and juniors who have started businesses and activating communities

(Home).

At a time when the role of universities needs to be strengthened for Korea, a country of entrepreneurship, the rise of entrepreneurial universities is expected. Considering that the capabilities of Korean universities have increased significantly from the past, and that students have more entrepreneurial aspirations than in the past, a new future of K-entrepreneurship by universities is at hand.



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## Chapter 6

# The Startup Ecosystem and Conglomerates

1. Strategic Objectives of Collaboration Between Conglomerates and Startups
2. Corporate Venture Capital: A Mechanism for Conglomerate–Startup Collaboration
3. In-House Ventures: Conglomerates as Incubating Organizations
4. Challenges in Collaboration Between Conglomerates and Startups
5. Success Factors in Conglomerate–Startup Collaboration
6. The Role of Conglomerates in the Startup Ecosystem

The Android operating system for smartphones was not developed by Google. Rather, it was initially created by Android Inc., a company founded in 2003 by Andy Rubin. Google acquired Android for \$50 million in July 2005 and subsequently commercialized the platform. In September 2008, Taiwanese manufacturer HTC launched the first Android smartphone, the G1, utilizing this operating system. Since then, major smartphone manufacturers—including Samsung Electronics, LG Electronics, Xiaomi, Huawei, OPPO—have released devices based on Android. As of 2021, the Android operating system accounts for over 70% of the global smartphone market.<sup>1)</sup>

AlphaGo, which gained international attention in 2016 through its Go match against Lee Sedol, was also not originally developed by Google. Instead, it was created by DeepMind, a startup founded in 2010 by Demis Hassabis. Google acquired DeepMind in 2014 for \$400 million. In the United States, this model of conglomerates innovating through collaboration with startups is well-established. Major pharmaceutical companies, for instance, have partnered with biotech startups for decades to drive new drug development. Global conglomerates leverage partnerships with startups to access cutting-edge technologies and fuel their growth. In fact, as of 2022, corporate investment in startups in the United States accounted for \$108 billion—45% of the total \$240 billion in venture capital funding.<sup>2) 3)</sup>

In Korea, conglomerates are increasingly investing in startups and adopting open innovation programs for strategic purposes that go beyond financial returns. These include strengthening the competitiveness of existing businesses, securing future growth engines, acquiring human capital, and build-

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1) <https://namu.wiki/w/Android>

2) Refers to startup investments made by all established firms, including conglomerates.

3) NVCA (2023). The original term used is “VC deals with CVC involvement.” In cases where multiple investors participate in a single deal, if even one participant is a corporate venture capital (CVC) entity, the deal is classified and recorded as involving CVC. Accordingly, the reported figure does not represent investments made exclusively by CVCs.

ing broader innovation ecosystems. Samsung, for example, evolved its Samsung Global Innovation Center—established in 2013—into Samsung NEXT in 2017, thereby expanding its startup collaboration initiatives globally. Hyundai Motor Company also launched its Strategic Technology Division in early 2017 to invest in or collaborate with startups possessing key technologies for future mobility. It has previously invested in Aurora, a U.S. autonomous driving technology company, and Grab, a leading mobility service provider in Southeast Asia. Other major Korean conglomerates, including SK, LG, and GS, are also actively investing in startups. As of May 2023, 52 out of 82 Korean conglomerates groups (63%) have a record of startup investment activity, and 30 groups (37%) have established separate, independent investment arms. In 2022, corporate investment in domestic startups—including by conglomerates—reached approximately KRW 4.5 trillion, accounting for over 30% of the KRW 14 trillion in total venture capital investment.<sup>4)</sup>

Conglomerates do more than merely serve as financial backers for startups. Through collaboration with conglomerates, startups gain access not only to funding for commercialization but also to complementary assets such as technology validation, market testing, manufacturing infrastructure, and marketing capabilities. These assets significantly enhance the startup's ability to grow and scale. Moreover, conglomerates are among the primary organizational incubators for startup founders. According to data, 20% of founders of certified venture companies previously worked at conglomerates, and 12% came from mid-sized firms.<sup>5)</sup> Notably, 35% of founders whose venture companies generate annual revenue exceeding KRW 100 billion also have conglomerates backgrounds.<sup>6)</sup> Recently, some conglomerates—most

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<sup>4)</sup> Shinyung Kang et al. (2023).

<sup>5)</sup> Venture Business Detailed Survey Report, December 2021.

<sup>6)</sup> <https://www.hankyung.com/economy/article/2014111882191>

prominently Samsung—have introduced internal programs to identify entrepreneurial talent and support spin-off ventures. As a result, among the 115 founders of domestic unicorns (including pre - and baby unicorns) selected by the Ministry of SMEs and Startups between 2019 and 2020, 70 had verifiable career histories. Of these, 24 (34%) were former conglomerates employees, with 13 (19%) coming specifically from Samsung.

However, collaboration between conglomerates and startups is far from straightforward. When the two parties' interests are misaligned, the startup—typically the weaker party—often has no choice but to accept the demands of the conglomerates. In some cases, there have been reports of conglomerates exploiting their investment position to imitate or misappropriate a startup's technology. Even in the absence of intellectual property violations, conglomerates may pressure startups to pivot their business models or product directions to align with the corporation's strategic interests.<sup>7)</sup> Therefore, collaboration with conglomerates cannot be assumed to always enhance startup performance. Outcomes depend on a range of situational factors and power dynamics that must be considered holistically.

Accordingly, this chapter examines one of the key mechanisms through which conglomerates engage with the startup ecosystem: Corporate Venture Capital (CVC). It begins by exploring the concept and historical background of CVC, followed by an analysis of the emergence and current state of CVC activity in Korea. The chapter then investigates how the role of conglomerates as incubating organizations for startups has evolved over time. It concludes with a discussion of the challenges encountered in the collaboration process between conglomerates and startups, and proposes future strategies to overcome these barriers and generate synergies.

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<sup>7)</sup> Kang (2019).

## 1 Strategic Objectives of Collaboration Between Conglomerates and Startups

The strategic objectives pursued by conglomerates through collaboration with startups are as follows. First, such partnerships aim to strengthen the technological competitiveness of existing business lines. This objective is typically achieved through two approaches: enhancing the efficiency of technology development via collaboration, and securing relevant technologies and talent. One reason why collaboration with startups contributes to cost reduction is that startups generally incur lower organizational management costs compared to conglomerates. Consider the case of Crowdworks, in which Naver made an equity investment in 2017. As part of its efforts to advance its AI capabilities, Naver needed extensive data labeling—work that is highly repetitive and would have been prohibitively expensive if assigned to its high-salaried software engineers. Instead, Naver partnered with Crowdworks, a company that dramatically reduced the cost of AI data labeling by leveraging crowdsourcing for data collection and processing. This collaboration allowed Naver to significantly lower its AI development costs.

Conglomerates can rapidly secure emerging technologies by partnering with or acquiring startups. For example, Apple addressed power efficiency issues in its AirPods and Apple Watch through the acquisition of Passif, a wireless chipset developer, in 2013. Passif specialized in ultra-low-power wireless communication chips for compact devices and held patents related to improvements in integrated circuit components for wireless receivers as well as Bluetooth audio transmission methods. Apple has also acquired multiple semiconductor-focused startups to gain a technological edge. Notable cases include the acquisition of PA Semi in 2008 and Intrinsicity in 2010. Leveraging the patents and engineering talent from these firms, Apple became the first in the industry to develop a 64-bit mobile application process-

or (AP) in 2013.<sup>8)</sup> Through such collaborations, conglomerates can partially substitute the role of their in-house R&D labs while simultaneously securing top-tier technical talent.

Second, conglomerates pursue collaboration with startups to discover new growth engines. conglomerates, as organizations optimized for the execution of existing businesses, are inherently less suited for innovation or exploratory activities such as new business development. Successful new ventures require entrepreneurial capabilities and a focus on innovation and growth—traits that are often difficult to cultivate within the confines of legacy business units. In practice, industry innovations have often emerged not from incumbents but from disruptive startups. In the hospitality sector, it was Airbnb—not Marriott—that led the innovation. In transportation, Tesla and Uber took the lead, while in financial services it was PayPal, and in retail, Amazon—not Walmart—drove transformation. Firms that actively invest in and engage with a broad range of startups are better positioned to monitor emerging technologies and market trends. Such companies are known for detecting and responding to disruptive technological changes earlier than their peers.<sup>9)</sup>

Because new business development is often difficult within existing organizational structures, some Korean conglomerates are instead pursuing new ventures through external collaboration with startups. For instance, GS Retail<sup>10)</sup> entered the emerging pet care market by making an equity investment in PetFriends, an online pet product retailer, in 2018 and subsequently acquiring the company in 2021. Mid-sized companies facing growth limitations in their core businesses are also turning to startups for new opportunities. Chokwang Paint , traditionally focused on paints and coat-

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<sup>8)</sup> Donga Business Review (DBR), November 2020, Issue 2, DBR Case Study: “Wireless Earphones with 70% Market Share: The Innovation Equation of AirPods.”

<sup>9)</sup> Maula et al. (2013).

<sup>10)</sup> More precisely, GS Home Shopping, which merged with GS Retail in 2020.

ings, is exploring new materials businesses through startup collaboration. In 2019, leveraging its accumulated expertise in chemical technologies, the company established a joint venture startup named Riformawith Professor Hyesung Park of UNIST to enter the catalyst-based advanced materials space.<sup>11)</sup> More recently, the company has actively implemented open innovation programs with startups, supporting proof-of-concept development in technologies such as bio-based materials (Chemifolio), automated painting robots (Magenta Robotics), and composite separator coatings for lithium-ion batteries (Xerabrid), while seeking deeper collaborative opportunities.<sup>12)</sup>

Third, conglomerates seek to create demand through the construction of related ecosystems. Intel, for example, established a dedicated investment pool to stimulate demand for its 64-bit microprocessor, Itanium, which was launched in 2001. The company invested in firms involved in software development, XML-based information security, IT consulting, and supply chain management—all of which represented potential demand-side users of the Itanium processor.<sup>13)</sup> In the early 2000s, Intel also invested heavily in Chinese internet companies such as Sohu.com, based on the expectation that the spread of internet usage would increase demand for personal computers, thereby driving demand for Intel’s processors. Similarly, Dunamu, which operates a cryptocurrency exchange, established an investment arm called Dunamu & Partners in 2018 and invested over KRW 100 billion in blockchain-related startups over a three-year period to build out the blockchain ecosystem.<sup>14)</sup> A comparable case is Amazon Web Services (AWS), which announced in August 2023 the launch of the “AWS Generative AI Accelerator” program in partnership with multiple venture capital firms to

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**11)** DBR, December 2019, Issue 1, DBR Case Study: “Sunbo Angel Partners: A Mid-Sized Enterprise Venture Investment Platform.”

**12)** <https://www.inews24.com/view/1544137>

**13)** Yoffie (2005)

**14)** <https://www.venturesquare.net/849125>

support AI startups. Apple's iPhone also serves as a representative case of ecosystem-based demand generation through startup collaboration. When Apple launched the iPhone 3G in 2008, it simultaneously introduced the iOS Software Development Kit (SDK) and announced the iFund, financed by Kleiner Perkins. This initiative encouraged a wave of developers to register apps on the App Store and spurred the creation of mobile app startups. By building a platform-based ecosystem through the App Store, Apple succeeded in both enhancing its product competitiveness and generating new demand.

From the startup's perspective, the most significant strategic benefit of collaborating with a conglomerate is securing a reference client. In order to survive, startups must gain legitimacy in the eyes of key stakeholders who shape the institutional environment. Receiving investment from, or collaborating with, a conglomerate can provide considerable credibility when dealing with other customers or suppliers. In essence, when a startup partners with a conglomerate on a transaction or joint project, it signals that the startup's product or service meets a high standard of quality and technological competence. This recognition often generates a halo effect that greatly facilitates scale-up, helping startups expand into global markets, build new partnerships, and attract follow-on investment.

For example, Crowdworks, which received seed funding from Naver in 2017, built a strong reference base through its participation in Naver's AI development efforts. Leveraging this credibility, the company went on to raise Series A funding in 2018, Series B in 2019, and pre-IPO funding in 2021. Similarly, Hoban Construction Co. is well known for providing test-beds that allow startups to demonstrate new technologies in real-world environments. AEOL Korea, a startup offering a ventilation system that improved dehumidification performance by 50% and reduced power consumption by 40% compared to conventional systems, faced barriers to entry

in the conservative construction sector. With support from Hoban Construction, the company was able to pilot its technology in apartment complexes such as Hoban Summit in Dangjin and Daejeon. This collaboration laid the groundwork for its successful KRW 22 billion Series B round in 2021.<sup>15)</sup>

Collaborations with conglomerates also provide startups with access to complementary assets essential for commercialization. This is especially critical in sectors such as biotech, where developing a new drug requires advanced testing equipment and expertise typically available only within large pharmaceutical firms.<sup>16)</sup> Recognizing this, some conglomerates have established dedicated internal organizations to support startup scale-up in alignment with their own strategic objectives. For instance, Naver supported Crowdworks in the early stages by mobilizing internal engineers and UX/UI designers to help build the service. GS Retail operates a startup acceleration unit known as the CoE (Center of Excellence) team. PetFriends, which received investment from GS Retail in 2018, applied the “sprint” methodology with the CoE team’s support to improve its UX/UI.<sup>17)</sup> Another example is the healthtech startup DANO, which received investment from GS Retail in 2015. During a period of rapid growth, DANO sought to formalize its customer service processes. The CoE team provided extensive operational expertise—collaborating with relevant GS Retail personnel to create customer service manuals, establish training programs, design compensation schemes for customer service agents, write job descriptions, and draft hiring announcements.

Partnerships with established large or mid-sized enterprises are particularly helpful in the commercialization of advanced technologies. One illus-

<sup>15)</sup> DBR, May 2022, Issue 2, “Let’s Go CVC: Plan H Ventures.”

<sup>16)</sup> Alvarez-Garrido & Dushnitsky (2016)

<sup>17)</sup> DBR, December 2018, Issue 1, DBR Case Study: “The Corporate Venture Capital (CVC) Strategy of GS Home Shopping.”

trative case is Riforma, the joint venture between Professor Hyesung Park and Chokwang Paint. Many technology entrepreneurs, such as university faculty or researchers at government-funded institutes, lack practical expertise in commercialization. In contrast, large and mid-sized enterprises possess the personnel, capital, and know-how required to bring technologies to market. In Riforma's case, Professor Park focused on technology development, while Chokwang Paint's business team handled business planning, marketing, and operations.

## 2 Corporate Venture Capital: A Mechanism for Conglomerates–Startup Collaboration

### Concept and Types of Corporate Venture Capital

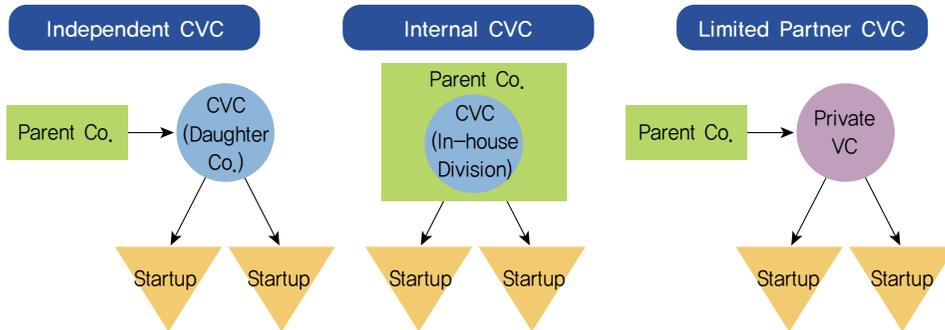
Corporate Venture Capital (CVC) is a key instrument used by conglomerates to collaborate with startups. As introduced in Chapter 3, venture capital (VC) refers to high-risk, high-reward capital invested in startups with significant growth potential. When such risk capital is supplied by a corporation, the term “corporate” is added, resulting in Corporate Venture Capital.

CVC investments are driven not only by the pursuit of financial returns, but also by the strategic interests of the parent company—such as entering new markets, acquiring emerging technologies, or building out an ecosystem. These strategic goals differentiate CVC from traditional financial VC.

As shown in [Figure 6-1], CVCs can be categorized into three types depending on how the capital is managed.<sup>18)</sup>

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<sup>18)</sup> Dushnitsky (2012)

**Figure 6-1 Corporate Venture Capital (CVC) Operational Structures**


Source: Dushnitsky (2012), 송봉규 (2022)

First, independent CVC entities are professional investment firms established with capital contributed by a conglomerate's holding company or affiliate. Most references to CVCs in government reports or the media pertain to this independent entity model. These firms typically obtain licenses as venture investment companies or as new technology business finance firms (so-called "Shingisa"). Some, however, operate without a separate license by registering as consulting firms and investing solely with their capital.

For example, Signite Partners, the CVC arm of Shinsegae Group, is a licensed venture investment company; Lotte Ventures is registered as a Shingisa; and Dunamu Partners operates without any formal license but still actively invests. Independent CVCs are organizationally and administratively separate from their parent firms and affiliates. They generally enjoy high levels of autonomy in selecting and executing investments, which allows them to balance strategic and financial goals effectively. However, this independence may also limit strategic alignment with the parent company and increase the risk of drifting toward purely financial investment behavior.

Second, in-house Corporate Venture Capital refers to an internal department within the conglomerate that is dedicated to startup investment, or an existing investment division that assigns dedicated personnel to focus on

startup deals. Companies such as GS Retail, Naver, and Hyundai Motor adopt this in-house CVC model for their startup investments. This structure typically offers stronger alignment with the parent company's core businesses, making it advantageous from a strategic integration perspective. However, it also presents notable drawbacks. Because business units often participate directly in selecting investment targets and executing deals, the autonomy of the CVC team and individual investment managers is generally lower. This can lead to slower decision-making and reduced agility in pursuing promising startup opportunities. To ensure effective operation of in-house CVCs, it is essential to grant sufficient discretion and authority to the dedicated investment team—as is the case with GS Retail, Naver, and Hyundai Motor.

Third, the fund-of-funds Corporate Venture Capital model refers to cases in which a corporation participates as a Limited Partner (LP) in an investment fund managed by an external venture capital firm. In this model, the corporation does not exert direct influence over fund management or investment decisions. However, because professional investors manage the capital, the risk of investment loss is relatively low. Some conglomerates that participate as LPs may request access to information on startups that have passed the fund's investment screening process, in addition to seeking basic financial returns. This model is particularly effective for building relationships with diverse actors within the startup ecosystem and for gathering intelligence on promising startups. For companies considering the establishment of a standalone or in-house CVC entity, the LP investment model serves as a useful preparatory step. It allows them to deepen their understanding of startup investment practices and to gain indirect exposure to sourcing and nurturing potential investment targets.

## History and Current Status of Corporate Venture Capital in the United States<sup>19)</sup>

The earliest known example of a conglomerate investing in a startup dates back to 1914, when DuPont invested \$25 million in General Motors (GM). Founded in 1908, GM was then a six-year-old automotive startup. At the time, GM needed funding for new vehicle development, while DuPont sought to expand demand for its products such as synthetic leather, plastics, and paints. DuPont's capital enabled GM to successfully develop a new model, and in 1916, GM was listed on the stock market. The onset of World War I subsequently drove a sharp increase in automobile demand, pushing GM's stock price up sevenfold. For DuPont, this investment proved successful both strategically and financially. However, it was not until the 1960s that U.S. conglomerates began systematically investing in startups, primarily as a strategy for business diversification. Since then, corporate investment in startups has experienced cyclical fluctuations in line with broader capital market trends, but over time it has evolved to become more sophisticated and significantly larger in scale. The development of Corporate Venture Capital (CVC) in the U.S. is typically divided into four distinct stages.

The first stage, spanning from 1960 to 1977, marks the initial phase in which U.S. conglomerates began investing in startups primarily for business diversification. The rise of CVC during the mid-1960s was largely driven by the tightening of antitrust regulations following the Great Depression, which limited organic expansion within existing industries. As a result, corporations sought growth by diversifying their business portfolios into entirely new sectors. In addition, corporations were motivated by the strong financial returns being reported by traditional venture capital firms and sought to emulate these results. The prevailing economic boom at the time also meant

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<sup>19)</sup> Based on CB Insights (2017) regarding the history of U.S. Corporate Venture Capital (CVC).

that many companies had surplus cash available to invest. Leading conglomerates of this first wave included DuPont, 3M, Alcoa, Boeing, Dow, Ford, GE, and Exxon. However, this period came to an abrupt halt with the collapse of the IPO market in 1973 and the onset of the oil crisis later that year. Investment losses mounted and capital became harder to access. As financial returns diminished, internal skepticism grew within many companies regarding the value of their CVC efforts. Questions also emerged as to whether these investments were truly delivering the expected strategic synergies. Consequently, corporate sentiment toward CVC cooled significantly. By 1978, only 20 corporations maintained active CVC units, signaling a sharp contraction in the overall scale of corporate startup investment.

The second stage, from 1978 to 1994, was shaped largely by the rise of Silicon Valley. In 1983, Time Magazine named the personal computer its “Machine of the Year,” and successful entrepreneurs such as Bill Gates and Steve Jobs became cultural icons. Universities began to incorporate entrepreneurship into their curricula. Favorable policy shifts—such as the relaxation of pension fund regulations allowing investment in venture capital and reduced capital gains taxes—further stimulated the venture funding environment. During this period, U.S. corporations invested in startups primarily to diversify their businesses by acquiring new technologies. While companies like Xerox, Johnson & Johnson, and Dow had maintained their CVC programs since the first stage, many other firms opted to invest indirectly through external venture capital firms or by pooling resources into joint investment funds. Some, like Kodak, created internal venture funds to incubate in-house ventures, attempting to replicate the dynamics of the startup ecosystem within their corporate structures. A notable trend during this period was the rise in foreign corporate investment in U.S. startups. Japanese firms, for instance, executed 60 deals in 1989 alone, and their

share of total corporate venture capital activity in the U.S. rose from 3% in 1983 to 12% in 1989. European firms also increased their investments, with most foreign CVCs similarly focused on acquiring advanced technologies. Corporate venture activity peaked in 1986, but was sharply disrupted by the stock market crash in October 1987, prompting many firms to suspend their CVC programs. Although the CVC landscape had matured somewhat compared to the first stage, it remained unstable due to several structural challenges: persistent conflict between the strategic goals of the parent company and the financial goals of the CVC unit, weak integration between startups and the parent's core operations, and inadequate incentive structures for CVC personnel. These weaknesses were reflected in the average lifespan of CVC programs during this period. Between 1988 and 1996, the average CVC program lasted just 2.5 years—only one-third the duration of a typical venture capital firm.

The third stage, from 1995 to 2001, coincided with the dot-com boom. The public listing of Netscape on August 9, 1995, marked the beginning of a surge in internet-related ventures. As venture capital investment soared, corporate venture capital (CVC) activity also expanded rapidly. Between 1995 and 2001, over 100 new CVC units were established, including 20 in the year 2000 alone. In that year, CVC investments reached \$17 billion, accounting for approximately 25% of total venture capital activity. A key feature of this period was the internationalization of CVC. Japanese conglomerates significantly increased their investments in U.S. startups, while U.S. corporations began using CVC as a tool to enter overseas markets. However, the most transformative development was a shift in the innovation model of American corporations. Traditionally, in-house central R&D laboratories had led new technology development. Starting in this period, open innovation through collaboration with external startups became mainstream. Reflecting this shift, the share of R&D spending by small firms in the U.S. rose-

dramatically from 4.4% in 1981 to 24.4% in 2009. Given this structural change, it became almost inevitable for large corporations to integrate startups into their innovation strategies. While CVC investment had previously been dominated by high-tech sectors such as IT and biotech, this period saw a surge in participation by media companies, including Reuters, News Corp., and Reed Elsevier. However, limitations in CVC compensation systems remained a persistent issue. Unlike private venture capital firms, CVCs typically lacked the flexibility to offer performance-based incentives at competitive levels. This led to a talent drain, as skilled CVC investment professionals moved to private VC firms. GE, for instance, saw 18 of its CVC staff depart between 1998 and 1999. Despite these losses, such personnel mobility had a silver lining—it fostered collaboration between corporate and private venture capital, creating stronger linkages between the two ecosystems. Nevertheless, the dot-com crash that began in March 2000 brought this high-growth phase to an abrupt end. Corporations with aggressive startup investment strategies suffered significant losses. In 2001, corporate losses from CVC activity totaled approximately \$9.5 billion, with Microsoft alone writing off \$5.7 billion. In response, companies such as Microsoft, AT&T, and News Corp. terminated their CVC programs, while Starbucks and Amazon halted further CVC investments.

The final stage of CVC development is considered to have begun in 2002 and continues to the present. Although many companies suspended their CVC programs following the collapse of the dot-com bubble, several firms—particularly in IT, biotechnology, and pharmaceuticals—continued their CVC investments. This marked the emergence of CVC as a recognized instrument of corporate innovation. The practice steadily expanded, with more than half of the top 30 firms in the technology, pharmaceutical, and telecommunications sectors establishing CVC arms. CVC has also diversified beyond technology-focused sectors into areas such as energy, consumer

goods, and construction. By 2009, approximately 20% of Fortune 500 companies had established CVC programs. Companies that had previously suspended CVC activity began to re-enter the space. Dell, which had halted CVC operations in 2004, resumed investments in 2011. Microsoft, after suffering major CVC-related losses in 2001, initially shifted to one-off investments from its cash reserves but reinstated its formal CVC program in 2016.

Notably, the average deal size for CVC investments has increased over time. These developments indicate that, while CVC activity in the United States has fluctuated in response to macroeconomic and technological shifts, corporations have gradually accumulated operational know-how. As a result, CVC has become a core element of many companies' open innovation strategies.

In the United States—the most active venture capital market globally—CVC accounts for a significant share of total VC activity (see Table 6–1). In 2022, CVCs participated in 3,281 out of 16,464 total VC deals, representing

**Table 6-1 Corporate Venture Capital (CVC) Investment Trends in the United States**

Category	2016	2017	2018	2019	2020	2021	2022	CAGR
Total VC Investment Deals	10,829	11,730	12,410	13,513	13,359	18,620	16,464	7%
CVC-Involved Investment Deals	1,737 (16%)	1,976 (17%)	2,267 (18%)	2,444 (18%)	2,540 (19%)	3,794 (20%)	3,281 (20%)	11%
Total VC Investment Amount (\$M)	84,021	90,031	146,411	149,295	171,396	345,448	240,931	19%
CVC-Involved Investment Amount (\$M)	39,207 (47%)	35,751 (40%)	71,702 (49%)	61,036 (41%)	82,442 (48%)	161,235 (47%)	108,421 (45%)	18%
Average VC Investment Amount per Deal (\$M)	8.8	8.8	13.5	12.8	15.0	22.5	18.6	13%
Average CVC-Involved Investment Amount per Deal (\$M)	25.1	20.1	34.6	27.7	35.6	46.8	37.8	7%

Source: NVCA (2023)

approximately 20% of deal count. On a capital basis, CVCs contributed \$108.4 billion, accounting for 45% of the total \$240.9 billion in venture capital investment that year. The average deal size for CVC-backed investments reached \$37.8 million in 2022—roughly twice the \$18.6 million average for all VC investments. This disparity is largely attributable to CVCs’ higher concentration in later-stage funding rounds.

### 📍 Case Study of Corporate Venture Capital in the United States

Unlike Korea, the United States does not impose regulations such as the separation of industrial and financial capital, which allowed Corporate Venture Capital (CVC) to develop earlier and more freely. Modern CVC in the U.S. began in earnest during the 1960s and 1970s, particularly among major conglomerates. One of the most prominent examples from this era is Exxon, which operated the largest CVC program of the 1970s. Seeking to diversify beyond its core oil business, Exxon envisioned building an information system leveraging its network of gas stations and made aggressive investments in computing. In 1982, it even launched the “Exxon PC.” However, the venture incurred significant losses, ultimately leading Exxon to abandon its diversification efforts and refocus on its petroleum business.

Xerox launched Xerox Technology Ventures (XTV) in an attempt to recover from its earlier strategic misstep of allowing Apple to capitalize on its innovations. Considered a prototype of the independent CVC model, XTV granted its management team substantial autonomy over financial decisions and offered compensation structures similar to those in private venture capital, including high rewards for successful exits. XTV achieved considerable financial success, particularly through investments in laser printing technology. However, internal conflict escalated due to the high bonuses paid to XTV management, leading to accusations that they were using Xerox resources to enrich themselves. This controversy ultimately led to the shutdown of the program.

A more advanced and stable example is Intel Capital. Unlike traditional venture capital firms, Intel Capital did not shy away from investing in competing startups simultaneously if those startups could contribute to the expansion of Intel’s processor or Wi-Fi technologies. Competitive overlap among portfolio companies was not treated as a disqualifying factor when such investments aligned with Intel’s strategic interests. While CVC units typically scale back during financial downturns

dueto parent-company constraints, Intel Capital maintained a long-term vision and continued its international investment activities even during market downturns. This resilience was supported by the fact that Intel Capital’s leadership team included founding members of the parent company, which helped secure sustained internal trust and support.

However, effective CVC leadership does not necessarily require internal promotion from the parent firm. Microsoft’s M12 Ventures exemplifies a different approach—it brought in experienced CVC professionals from outside the organization. M12 adopted a strategy focused on high-growth startups in strategically important sectors, such as B2B enterprise solutions, SaaS, and next-generation cloud infrastructure.

Source: Seongmin Jeon (2020). “Corporate Venture Capital in the United States.” Korean Venture Investment Research Report, Korean Banking and Financial Law Society.

### History and Current Status of Corporate Venture Capital in Korea

Unlike the United States, where Corporate Venture Capital (CVC) has a long history, Korean conglomerates only began to show interest in startup investment in the late 1990s. During the 1970s and 1980s, Korea achieved remarkable economic growth by implementing a government-led industrial strategy that concentrated support on a small number of conglomerates and promoted export-oriented development.<sup>20</sup> At the time, Korea’s industrialization model was centered on importing raw materials, components, and equipment from abroad, and then manufacturing goods using low-cost labor to export at competitive prices. Given the acute shortage of domestic capital, technology, markets, and industrial infrastructure, this approach was a pragmatic necessity. It is important to recognize that such growth would not have been possible without the desperate post-war survival environment and the dedicated efforts of a highly capable and industrious workforce.

During the 1980s and 1990s, as Korea advanced through an industrializa-

<sup>20</sup> Kim, Insoo (2000)

tion phase driven by technological imitation, a foundation was laid for the emergence of technology-based startups in the materials, components, and equipment sectors.<sup>21)</sup> This development was largely underpinned by the accumulation of technical capabilities during earlier decades. Initially, Korean conglomerates operated with foreign equipment and components. However, in pursuit of cost reduction and enhanced competitiveness, they began to recognize the strategic necessity of domesticating the production of key materials and parts. This localization drive created opportunities for entrepreneurial activity, particularly among employees in production, R&D, and procurement divisions of conglomerates, who identified commercial potential and left to start their own ventures. This trend was further accelerated by the expansion of Korea's pool of scientific and technical talent, bolstered by government-sponsored overseas education programs, the establishment of public research institutes, and the development of advanced science and engineering graduate programs at institutions such as KAIST. As discussed in Chapter 2, the period also saw the rise of spin-off startups from universities and government research institutes, including companies such as Trigem Computer Inc., QNIX, and Medison Co.

Korean conglomerates began to play a financial role in the startup ecosystem during the late 1990s and early 2000s, a period often referred to as the first “venture boom.” During this time, many internal ventures (spin-offs) from conglomerates began to operate independently, creating a need for equity investment from their parent companies. While these investments were initially intended to support internal ventures, the broader venture capital market was also performing well, leading to promising financial returns. In response, several conglomerates established dedicated venture investment arms—either as standalone legal entities or as internal units managing direct investments from corporate reserves. Notable examples of CVCs launched

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<sup>21)</sup> Lee et al. (1988)

during this period include LG Venture Investment (1996), POSCO Technology Investment (1997), Samsung Venture Investment Corp. (1999), and Dream Discovery Co. (now CJ Investment) in 2000. These firms represent the first generation of CVCs that emerged in conjunction with Korea's initial venture capital boom. In addition to establishing group-level investment companies, some conglomerates also pursued external investments for strategic purposes by contributing capital to private venture capital funds or making direct investments from corporate reserves. For instance, in 2000, LG Electronics partnered with Stick Investment to form a KRW 30 billion fund, marking its entry into third-party VC fund participation. It followed up with a KRW 25 billion fund with LB Investment in 2004 and a KRW 30 billion fund with KTB Network in 2005. In each case, LG Electronics acted either as the sole limited partner (LP) or the primary LP. Separately, LG Information & Communications began making direct investments from its own cash reserves in 1999. Following its merger into LG Electronics in 2000, the venture investment functions of both companies were consolidated under LG Electronics' CTO office, which continued to pursue a dual-track investment strategy combining both direct and indirect investments.

After the collapse of the venture boom in 2001, the number of certified venture companies in Korea declined sharply, and the enthusiasm among conglomerates for in-house ventures and startup investment also waned. The following decade is widely regarded as a period of stagnation for the Korean startup ecosystem. This trend began to reverse in the aftermath of the 2008 global financial crisis. In an environment characterized by low interest rates and the need to escape structural low growth, startup investment regained attention as an alternative path to innovation and economic revitalization. An increasing number of conglomerates began to adopt Corporate Venture Capital (CVC) programs, not merely for financial returns, but to achieve strategic objectives such as securing new technologies or entering emerging

markets. To encourage this shift, the Korean government in 2018 significantly relaxed the requirements and behavioral restrictions associated with the establishment of venture holding companies by conglomerates. Despite these reforms, substantial regulatory constraints remained in place, limiting the ability of conglomerates to invest in startups through formal venture holding structures. As a result, policy discussions began in 2020 around allowing general holding companies—previously restricted under Korea’s separation of banking and commerce principle—to own CVC entities under certain conditions. In December 2021, the regulatory framework was amended to allow general holding companies to own CVCs on a limited basis, marking a significant step toward enabling greater corporate participation in startup investment.

However, the aforementioned regulatory changes apply specifically to general holding companies. Non-financial corporations that are not structured as holding companies remain free to establish investment entities capable of forming venture funds, such as venture investment companies or new technology business finance firm (Shingisa). These firms can also make direct startup investments from retained earnings or act as limited partners (LPs) in private venture capital funds. According to a report by Kang Shin-hyung et al.,<sup>22)</sup> as of May 2023, 30 out of 82 publicly disclosed Korean conglomerate groups had either established or were actively operating independent investment firms, including venture investment companies and Shingisa. In addition, several other groups were reportedly considering the launch of new entities. Companies such as Hyundai Motor, Naver, and GS Retail have also established in-house organizations dedicated to startup investment and open innovation initiatives, and are actively pursuing such activities. Based on data from TheVC analyzed by Kang and colleagues, corporate venture capital accounted for 31% of total venture capital investment

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<sup>22)</sup> Shinhyung Kang et al. (2023).

in 2022, amounting to approximately KRW 4.5 trillion. This indicates that Corporate Venture Capital is already playing a highly active role in Korea's venture investment landscape (see Table 6-2).

**Table 6-2** Trends in Venture Capital and Corporate Venture Capital Investment Amounts  
(Unit: 100 million KRW)

Category	Total	2016	2017	2018	2019	2020	2021	2022	CAGR
Venture Capital Investment	545,922 (100%)	18,386 (100%)	15,345 (100%)	77,039 (100%)	61,133 (100%)	58,974 (100%)	172,288 (100%)	142,758 (100%)	41%
Corporate Venture Capital Investments	166,771 (31%)	6,233 (34%)	6,447 (42%)	21,740 (28%)	22,877 (37%)	19,809 (34%)	45,090 (26%)	44,575 (31%)	39%

Source: Kang, Shin-hyung et al. (2023)

A more detailed analysis reveals that, in recent years, in-house Corporate Venture Capital (CVC)—defined as direct investment from a company's internal reserves—has grown more rapidly than investment through independent legal-entity CVCs such as venture investment companies (see Table 6-3). This trend is particularly pronounced among large Korean conglomerates and foreign corporations, both of which have significantly increased their in-house CVC activity (see Table 6-4). In contrast, the CVC investment

**Table 6-3** Investment Trends by Type of Corporate Venture Capital (CVC)  
(Unit: 100 million KRW)

Category	Total	2016	2017	2018	2019	2020	2021	2022	CAGR
Corporate Venture Capital (CVC) Investment	166,771 (100%)	6,233 (100%)	6,447 (100%)	21,740 (100%)	22,877 (100%)	19,809 (100%)	45,090 (100%)	44,575 (100%)	39%
Independent CVC Entities	80,934 (49%)	3,914 (63%)	3,886 (60%)	9,309 (43%)	13,026 (57%)	11,534 (58%)	21,169 (47%)	18,095 (41%)	29%
In-house CVC Units	85,838 (51%)	2,319 (37%)	2,561 (40%)	12,431 (57%)	9,851 (43%)	8,275 (42%)	23,920 (53%)	26,480 (59%)	50%

Source: Kang Shin-Hyung et al. (2023)

**Table 6-4 | CVC Investment Trends by Parent Company Size** (Unit: 100 million KRW)

Category	Total	2016	2017	2018	2019	2020	2021	2022	CAGR
Corporate Venture Capital (CVC) Investment	166,771 (100%)	6,233 (100%)	6,447 (100%)	21,740 (100%)	22,877 (100%)	19,809 (100%)	45,090 (100%)	44,575 (100%)	39%
Large Corporations	58,382 (35%)	2,055 (33%)	2,731 (42%)	4,744 (22%)	8,323 (36%)	7,885 (40%)	14,998 (33%)	17,645 (40%)	43%
Mid-Sized and Small Enterprises	84,430 (51%)	3,743 (60%)	3,051 (47%)	8,219 (38%)	12,036 (53%)	11,369 (57%)	26,596 (59%)	19,417 (44%)	32%
Foreign Companies	23,960 (14%)	435 (7%)	665 (10%)	8,778 (40%)	2,517 (11%)	556 (3%)	3,495 (8%)	7,514 (17%)	61%

Source: Kang Shin-Hyung et al. (2023)

**Table 6-5 | Corporate Venture Capital Investment Amounts by Stage (CVC Type, Cumulative 2016-2022)** (Unit: 100 million KRW)

Category	Total	Seed	Free A	Series A	Series B	Series C	Series D and Beyond
Corporate Venture Capital (CVC)	166,771 (100%)	4,291 (100%)	5,515 (100%)	44,134 (100%)	47,481 (100%)	23,325 (100%)	42,027 (100%)
Independent Corporate Venture Capital	80,934 (49%)	1,693 (39%)	3,355 (61%)	25,335 (57%)	30,282 (64%)	11,765 (50%)	8,504 (20%)
In-house Corporate Venture Capital	85,838 (51%)	2,597 (61%)	2,160 (39%)	18,799 (43%)	17,198 (36%)	11,560 (50%)	33,523 (80%)

Source: Kang, Shin-hyung et al. (2023)

activity of mid-sized and small enterprises tends to be highly sensitive to external economic conditions, expanding rapidly during favorable market periods and contracting sharply during downturns. In terms of investment stage, independent CVC entities primarily focus on financial return maximization and therefore allocate more capital to Pre-A, Series A, and Series B rounds.

In-house CVCs, on the other hand, tend to be more active in seed rounds and post-Series D investments, where the strategic objectives of the parent

company are more pronounced (see Table 6–5). Despite the increasing activity, the Korean CVC landscape remains underdeveloped in terms of late-stage investments, especially when compared to the more mature U.S. market. Late-stage CVC funding continues to be a critical gap in Korea’s startup financing ecosystem.

### **3** In-House Ventures: Conglomerates as Incubating Organizations

Beginning in the mid-1990s, advancements in information technology (IT) and the rapid spread of internet access led to a global surge in IT-related startups. In Korea, the establishment of the KOSDAQ market in 1996 heightened investor interest in small-cap technology stocks and improved access to capital. Moreover, following the 1998 IMF financial crisis, the Korean government actively promoted entrepreneurship as part of its national economic recovery strategy. Starting in the mid-1990s, researchers and engineers within large corporations also began to join the startup wave. To prevent the outflow of high-skilled talent—particularly software developers—major IT and telecommunications companies such as Samsung SDS, LG CNS, Hyundai IT, LG Electronics, Samsung Electronics, KT, and Dacom (now LGUplus) began introducing in-house venture programs. Some of Korea’s most iconic tech companies originated from these corporate initiatives. For example, Interpark began as an in-house venture at Dacom in 1995. Naver also traces its roots to Samsung SDS, where it was launched as an internal venture in 1997 before being spun off in 1999.

However, interest in in-house ventures declined sharply following the burst of the IT bubble in 2000. This downturn persisted until the global financial crisis of 2008, after which a prolonged low-interest-rate environment

and the search for new growth engines led to a resurgence in venture investment and startup support programs. As part of this trend, in-house ventures once again gained attention. Unlike earlier initiatives, conglomerates' in-house venture programs in this period became more structured and sophisticated. A leading example is Samsung's "C-Lab (Creative Lab)" program. C-Lab originated from the *eyeCan* project, an eye-tracking mouse initiative designed to help individuals with mobility impairments.<sup>23)</sup> In 2011, five Samsung employees voluntarily dedicated their personal time to develop a product that would allow patients with severe physical disabilities—those unable to move or speak—to control a mouse using only their eye movements. The success of this initiative, along with the emergence of additional CSR (Corporate Social Responsibility)–oriented projects, demonstrated that voluntary employee participation could lead to the development of innovative products. Recognizing this potential, Samsung officially launched its in-house venture program, C-Lab, in December 2012.

**Table 6-6 | Annual Status of In-house Venture Incubation by Samsung Electronics**

Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	현재	총계
Incubated In-house Ventures	27	38	40	48	30	46	30	39	41	40	12	391

Source: Electronic Times, 2023.7.23 (<https://www.etnews.com/20230721000151>)

To manage these projects, Samsung established a dedicated organizational unit called the "Creative Development Center." Initially launched with a team of four, the center grew to approximately 30 personnel by 2019. While the program originally focused on commercializing ideas proposed by Samsung employees, it expanded in October 2018 with the launch of "C-Lab Outside," an initiative designed to incubate external startups. This ex-

<sup>23)</sup> Hwang, Sunho and Shin, Junseok (2018).

pansion laid the foundation for more active interaction between Samsung and the broader startup ecosystem.<sup>24)</sup> C-Lab now nurtures approximately 40 in-house ventures annually and, by 2023, had supported over 400 ventures in total (see Table 6–6). Notable alumni include *AIMT*, a company that produces thermal insulation materials from recycled PET bottles, and *Linkflow*, developer of a wearable neckband camera—both of which were designated as pre-unicorns in 2020 and 2021, respectively. Other successful spinoffs such as *Mangoslab*, *MOPIC Labs*, and *Prinker Korea* were selected as baby unicorns. These outcomes demonstrate the C-Lab program’s effectiveness in cultivating high-potential startups and its continued success as a model for in-house venture incubation.

C-Lab selects projects through a public audition process that is live-streamed to all employees. The process begins with employees submitting innovative ideas at any time via the internal platform “Mosaic.” These ideas are then shortlisted based on a combination of virtual “coin” investments cast by fellow employees and evaluations by an internal review panel. Shortlisted candidates pitch their ideas directly to an audience of 100 peer evaluators and company executives. Final selection is determined through real-time audience voting during the presentation. This transparent process is designed to eliminate managerial bias and prevent undue influence from senior leadership, ensuring that ideas are evaluated purely on their merit. Importantly, there is no preset limit on the number of projects selected in each round. The focus is on the absolute quality of the ideas rather than competitive ranking. For instance, in one cohort, 10 out of 12 finalist projects were selected—illustrating the program’s flexibility and emphasis on innovation potential.

C-Lab operates under a *holacracy* model to promote creativity. At its core,

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<sup>24)</sup> DBR, June 2019, Issue 1, DBR Special Report: “The Innovation Strategy of Samsung Electronics’ Venture Program C-Lab.”

this structure eliminates traditional hierarchies in favor of a flat, decentralized decision-making process. The originator of an idea becomes the *Creative Leader* (CL) and takes charge of forming a project team. They can post internal job listings and personally select team members, regardless of age, rank, or department. Team members are seconded to the Creative Development Center for one year, where they work in a flexible environment. There are no formal attendance requirements, and team members have full autonomy in setting their work plans. Dedicated budgets are allocated for prototype development, and project teams operate from independent spaces physically separated from existing business units. Reporting and procedural requirements are minimized—both for budgets and project execution. Once a project demonstrates initial commercial viability, it may be spun off under the “C-Lab Spin-off” program. The goal is to encourage the idea originator to assume the same level of ownership and accountability as a real startup founder. Importantly, failure does not result in negative performance evaluations or hinder future promotions. Even if an employee exits Samsung to launch a startup through a spin-off, they are eligible for reemployment within five years.

In addition to Samsung, major Korean conglomerates such as SK, CJ, LG, and Hyundai Motor have also introduced in-house venture programs targeting their employees. While companies like Samsung have operated such programs for years, many others have launched them more recently in response to the resurgence of the venture boom. In this respect, the corporate in-house venture trend of the 1990s appears to be repeating itself. However, these initiatives are not without criticism. For global conglomerates managing businesses at trillion-won scales, allocating resources and personnel to accessory-type products with limited revenue potential or to domestically confined services is often viewed as offering minimal strategic value. In some cases, ideas previously rejected through formal new business develop-

ment processes are pursued via the in-house venture track as a backdoor mechanism. Employees participating in in-house ventures also voice concerns. While some companies, such as Samsung, have adopted radically flexible HR structures, many others still operate within rigid legacy personnel systems. In such environments, in-house ventures are often evaluated using the same financial performance metrics—such as revenue and profitability—as conventional business units. This fails to account for the volatility and iterative nature inherent in startup development. In-house venture programs are more likely to succeed when they are supported company-wide, given significant operational autonomy and compensation flexibility, and allowed to function independently from legacy business units—as exemplified by Samsung. In contrast, in-house ventures that are tightly bound to existing structures are at risk of being discontinued once the current venture boom subsides.

#### **4** Challenges in Collaboration Between Conglomerates and Startups

There is no doubt that collaboration with startups serves as a vital source of innovation for conglomerates. However, forging effective partnerships between large corporations and startups is fraught with challenges. One of the most common misconceptions among startups is the belief that receiving investment from a conglomerate will automatically lead to operational collaboration. This misconception is well illustrated by the case of “Startup A,” which sought to disrupt the seafood distribution industry.<sup>25)</sup>

The startup created value by purchasing seafood directly at the source,

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<sup>25)</sup> Kim, Gayoung and Lee, Jonghoon (2023).

then processing and distributing it through its own channels. Recognizing the innovation in its supply chain model, several corporate venture capital (CVC) arms affiliated with major conglomerates participated in each of its funding rounds over several years. From the perspective of these conglomerates—whose core businesses relied on traditional offline distribution—Startup A’s online model was inherently appealing. Startup A, in turn, anticipated that CVC investment would lead to greater purchase volumes from the conglomerate, enabling economies of scale and increased brand recognition. Following the investment, the startup expanded its production capacity and assigned dedicated personnel to handle what it assumed would become a strategic corporate partnership. However, no meaningful collaboration materialized. The CVC investment manager introduced Startup A to relevant departments through corporate planning teams and encouraged collaboration. Yet, from the standpoint of operational managers, there was little incentive to shift away from existing suppliers with whom they had established stable relationships. Despite multiple meetings, no substantial collaborative project ever emerged.

From a startup’s perspective, one of the most serious concerns in collaborating with a conglomerate is the risk of intellectual property theft or imitation. Early-stage startups, which often lack robust legal protections for their innovations, are particularly vulnerable. These startups typically need capital urgently and are therefore compelled to disclose detailed information about their technologies, products, and business models during investor meetings. If their core technologies are protected by patents, the risk is somewhat mitigated—but for idea-based products or services lacking formal intellectual property protection, imitation becomes significantly easier.

There have been publicized cases in which startups claimed that their technologies were copied following investment discussions with conglomerates. In some instances, technology theft has reportedly occurred

through more indirect means—for example, when a conglomerate commissions a startup to develop a product and then passes the specifications to a third party for production. In joint development arrangements, conglomerates often retain partial intellectual property rights, making it difficult for startups to legally establish that theft has occurred. Additionally, concerns about jeopardizing future business relationships frequently deter startups from filing complaints. Similar cases have been reported internationally, prompting some venture capital firms to advise early-stage startups to avoid engaging with corporate venture capital altogether. Evidence suggests that risks of misappropriation are lower when a third-party venture capital firm is involved in monitoring and mediating the collaboration, or when the startup's product has already been commercialized and introduced to the market. Empirical studies support the conclusion that from an IP protection standpoint, it is generally more advantageous for startups to accept corporate venture capital investment at a later stage. Moreover, involving a reputable financial VC to serve as an intermediary between the startup and the conglomerate is shown to reduce the likelihood of technology misappropriation and to better safeguard the startup's interests.

Even in the absence of technology theft or imitation, startups may still face pressure from conglomerates to participate in projects that lack commercial viability or fall outside the startup's strategic interests. From the perspective of a conglomerate, no matter how innovative a startup's technology or business model may be, it is of limited value unless it aligns with the conglomerate's existing operations or long-term priorities. Rather than focusing on rapid commercialization and immediate revenue generation, conglomerates often favor projects that enhance their technological competitiveness over the long term. This misalignment in time horizons and objectives can constrain the startup's strategic flexibility. Empirical research supports this concern. Studies have found that when corporate investors exert sig-

nificant influence within a startup's investor group, the likelihood of a successful exit—whether through acquisition or IPO—tends to decline.<sup>26) 27)</sup> This suggests that strategic entanglement with a conglomerate may reduce optionality for startups, particularly if the corporate partner deprioritizes short- to medium-term exit opportunities in favor of longer-term capability building.

As demonstrated, numerous challenges hinder effective collaboration between conglomerates and startups. The core issue lies in the misalignment of interests. Conglomerates are primarily focused on achieving their own strategic outcomes, rather than fostering the growth of the startup. Conversely, startups are naturally more concerned with scaling their businesses than with solving the conglomerate's internal problems. Moreover, the relationship between conglomerates and startups is inherently asymmetrical. When a power imbalance exists, the weaker party—typically the startup—is often compelled to conform to the logic and demands of the stronger counterpart. In reality, both parties engage in open innovation with differing, often conflicting expectations. This strategic misalignment—what might be called “mutual delusion under a shared banner”—is a defining feature of open innovation in practice. Therefore, for open innovation strategies to succeed, it is essential that the strategic objectives of both conglomerates and startups are not only clearly defined but also mutually compatible. Specifically, the startup's growth trajectory must be meaningfully aligned with the conglomerate's strategic goals. If the startup can scale through the process of helping the conglomerate achieve its objectives, collaboration becomes viable. However, if the startup is perceived as a potential competitor to the conglomerate's core business, meaningful partnership is unlikely to materialize.

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<sup>26)</sup> Pahnke et al. (2015)

<sup>27)</sup> Kang (2019)

## 5 Success Factors in Conglomerate–Startup Collaboration

To ensure successful collaboration with startups, conglomerates must pay close attention to several critical factors. First and foremost is strong commitment and engagement from top management. Programs such as Corporate Venture Capital (CVC) require sustained investment of resources over time. Without building a solid reputation within the startup ecosystem, it is difficult for a conglomerate to attract high-quality startup partners. Moreover, generating strategic outcomes from startup collaboration often requires reallocating internal resources—including personnel and assets from existing business units—which entails significant opportunity costs. Engaging effectively with startups also demands a high tolerance for risk and extensive cross-functional coordination within the conglomerate. Line managers and business unit staff are frequently hesitant to assume the risk of deploying unproven technologies or products from early-stage startups. Given these barriers, top management must demonstrate explicit interest and involvement in startup collaboration. Without visible executive sponsorship, it is unlikely that operational units will fully commit or take on the risks necessary to translate startup partnerships into strategic performance outcomes.

Second, mutual understanding and active exchange between operational teams and startups are essential. Simply introducing a startup to a business unit does not guarantee collaboration. Effective cooperation only occurs when there is alignment in understanding between the two sides. It is the responsibility of open innovation units—such as CVC teams—to mediate, coordinate, and identify common ground between internal stakeholders and startups. In many cases, startups lack insight into what technologies or products are actually needed in the field, while internal teams may not rec-

ognize how a startup's solution could enhance their existing operations. Therefore, it is not enough to introduce startups to internal departments; efforts must also be made to help startups understand the conglomerate's complex organizational structure and decision-making processes. Promoting a startup's innovative technology or product within a large organization often requires sustained internal communication. At a minimum, open innovation teams should circulate regular emails or newsletters sharing information about portfolio or pipeline startups. In addition, they must frequently engage directly with internal teams—formally or informally—to understand operational needs and discuss specific collaboration models. Some conglomerates establish executive-level councils or advisory groups to discuss startup trends and potential areas of collaboration, and occasionally invite startup founders for internal IR-style presentations. However, formal mechanisms alone are often too rigid to adapt to rapidly evolving opportunities. As a result, some companies prefer a more agile approach—having open innovation staff proactively reach out to business unit leaders and decision-makers. In some cases, companies even designate physical spaces within their headquarters to house startups, creating an environment conducive to frequent, informal interaction between startup teams and internal stakeholders.

Third, collaboration should prioritize the growth and support of startups, rather than focusing solely on control or ownership. When conglomerates pursue startup engagement purely as a means of achieving their own strategic objectives, they may secure legitimacy within their own internal hierarchy—but risk being marginalized by the broader startup ecosystem. Instrumentalizing startups for internal corporate gain may deliver short-term results, but it undermines the trust necessary for long-term ecosystem integration. If a conglomerate gains a reputation for exploiting startups, competitive and high-potential startups will increasingly avoid collaboration,

ultimately constraining the company's ability to engage in open innovation over time. Leading firms that succeed in open innovation recognize this and actively work to build equitable, trust-based relationships with startups. For example, even when taking equity stakes, many of these firms remove exclusivity clauses from contracts and take extra precautions to avoid any perception of intellectual property misappropriation. One notable case is GS Home Shopping (now GS Retail), which operates a Center of Excellence (CoE) explicitly focused on supporting startups from the startup's perspective. Such efforts signal a genuine commitment to ecosystem building and enhance the firm's long-term credibility and effectiveness as a collaborative innovation partner.

Finally, if a conglomerate faces challenges in independently identifying startups suitable for open innovation, one effective approach is to delegate open innovation activities to an external private venture capital firm. Fundamentally, startups prioritize their own growth trajectories, while conglomerates are more focused on aligning any collaboration with their existing strategic objectives. As such, misalignment and friction between the two sides are often inevitable. Startups, typically in the weaker position as investment recipients, frequently feel constrained in expressing dissenting views or negotiating terms when dealing with the CVC arm of a large corporate investor. The pressure to secure funding often discourages them from pushing back against requests that may not align with their interests or growth strategies. In contrast, an independent, third-party venture capital firm—operating from a neutral standpoint—is often better positioned to serve as a mediator. These firms can objectively assess the interests and constraints of both parties and help facilitate alignment. By acting as a buffer and honest broker, external VCs can create a healthier and more balanced environment for collaboration, ultimately enhancing the likelihood of successful open innovation outcomes.

## 6 The Role of Conglomerates in the Startup Ecosystem

Three key roles are proposed for conglomerates within the startup ecosystem. First, conglomerates should serve as testbeds and platforms for global expansion. For startups to scale beyond the early stage, they need credible reference customers and access to international markets. While it is certainly important for conglomerates to maintain their own technological competitiveness and advance their business capabilities through startup collaboration, it is equally critical that they actively adopt and implement the innovative technologies and products offered by startups. Even when outcomes are uncertain, taking bold steps to pilot and integrate novel innovations contributes positively to the conglomerate's entrepreneurial spirit over the long term. By doing so, conglomerates not only strengthen their internal innovation capacity but also help startups build credibility and reach broader markets—thereby playing a catalytic role in the overall growth of the ecosystem.

Second, conglomerates should act as a major source of capital within the startup ecosystem. This role is particularly critical in sectors such as materials, components, and equipment, where commercialization timelines are long and large corporations are often the primary end customers. While it may be advantageous from a vertical integration standpoint for conglomerates to acquire fully developed technologies or handle all processes internally, such an approach is rarely efficient across the board. For non-core functions, it is essential that conglomerates engage openly with the external startup ecosystem and actively seek out innovative solutions. By providing funding and commercialization opportunities—especially in capital-intensive and technically demanding sectors—conglomerates can accelerate the development of specialized startups while also enhancing their own agility and in-

novation capacity.

Third, conglomerates must take the lead in expanding the exit market through active M&A of startups. One of the most critical structural weaknesses in Korea's venture ecosystem is the limited availability of exit pathways beyond IPOs. This constraint is driven not only by the well-documented "Not Invented Here" (NIH) syndrome—where internal development is favored over external technologies—but also by the legacy perception of M&A in Korea as a tool for restructuring failed companies rather than as a proactive growth strategy. In contrast, global tech giants such as Google and Microsoft actively use M&A as a means to monitor emerging technologies and market shifts, acquire differentiated capabilities, and secure top talent. Apple's acquisition of startups to develop its application processor (AP) chipsets and low-power technology for AirPods are prime examples of strategic capability building through external innovation. If Korean conglomerates become more proactive in pursuing startup acquisitions—not merely as a fall-back, but as a deliberate innovation strategy—they will not only enhance their own competitiveness but also contribute to the formation of a robust and sustainable exit market. This is essential for creating a virtuous cycle in the venture ecosystem, where successful exits drive further investment, innovation, and entrepreneurial activity.

Conglomerates and startups are, by nature, difficult to integrate—like oil and water. Their ways of working, decision-making speeds, and organizational structures differ fundamentally. This misalignment is one of the key reasons many past in-house ventures within Korean conglomerates failed: they were managed like conventional business units, rather than as autonomous startups. Yet startups remain a vital source of technological innovation. No conglomerate—regardless of size or resources—can succeed in isolation by ignoring the startup ecosystem. If Korea's startup ecosystem is to advance further, and if its conglomerates are to maintain and expand

their global competitiveness, collaboration between these two sectors is not optional—it is essential. The most critical success factor is alignment of interests. Only when both parties are moving toward a shared objective can they take meaningful and transformative steps forward. True collaboration begins not with control, but with mutual understanding and strategic convergence.



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## Chapter 7

# Startup Policy in Korea

1. Evolution of Startup Policy in Korea
2. Key Characteristics of Korea's Startup Policy
3. Challenges in Korea's Startup Policy Landscape

Government policy plays a critical role in shaping the startup ecosystem, as it directly influences the decisions of startups and their surrounding stakeholders. A prominent example is Coupang's listing on a U.S. stock exchange in March 2021, which was largely driven by regulatory considerations. Analysts widely agree that the absence of dual-class share provisions in Korea at the time was a decisive factor. Dual-class shares are an exception to the "one share, one vote" principle, allowing founders or controlling shareholders to hold shares with voting rights exceeding those of common stock. Because this structure was not permitted under Korean law at the time, Coupang founder Bom Suk Kim chose to pursue a U.S. listing to secure managerial control through such provisions. Following Coupang's IPO, the debate over dual-class shares in Korea gained significant momentum. In April 2023, the National Assembly passed legislation allowing founders of unlisted ventures and startups to issue shares with up to 10 votes per share.<sup>1)</sup> Had this regulatory change occurred earlier, it is plausible that Coupang might have made a different decision regarding its listing venue.

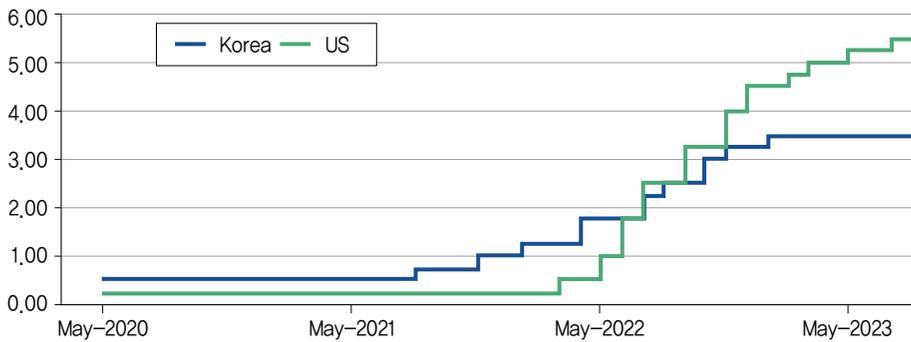
Macroeconomic policies, such as interest rate adjustments, also have a significant impact on the startup ecosystem. The post-COVID-19 liquidity crisis and the resulting "startup investment cliff" serve as a clear example. During the pandemic, the United States maintained an ultra-low interest rate environment, holding rates near zero. The first rate hike occurred in March 2022, when the Federal Reserve raised its benchmark rate from 0.25% to 0.5%. Over the course of the next 16 months, the U.S. implemented a total of 11 rate increases through July 2023. In contrast, Korea held its base rate steady at 3.5% starting in January 2023. [Figure 7-1]

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<sup>1)</sup> The relevant law allowing this had already been proposed in June 2020, a year before Coupang's U.S. IPO. However, due to concerns over fairness, fears of management succession abuses, and tax evasion, the bill repeatedly failed to pass through the National Assembly.

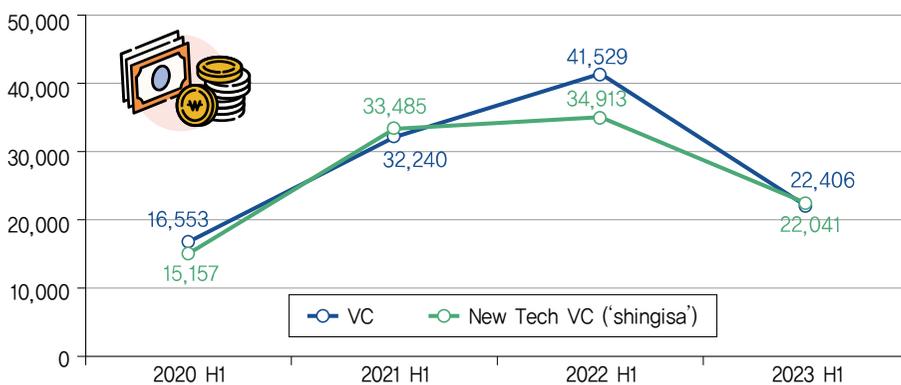
shows the trajectory of the Korea - U.S. base interest rate differential. The shift to a high-interest-rate environment immediately translated into reduced liquidity in the market. As illustrated in [Figure 7-2], this led to a sharp contraction in domestic venture investment during the first half of 2023, with investments by venture capital firms declining 46.9% and those by new technology venture capital company (“Shingisa”) falling 35.8% compared to the same period in 2022.

**Figure 7-1 Base Rate of Korea and the US (2020-2023.8)** (UNIT: %)



Source: Bank of Korea, The Federal Reserve

**Figure 7-2 Venture Investment Performance in the First Half (2020-2023)**



Source: Venture Capital Association, Recompiled.

As the above examples illustrate, national policy fundamentally shapes the startup ecosystem. As Nobel Laureate Douglass North stated in 1993, policy constitutes a society's institutional framework—it defines the “rules of the game” that guide the behavior of its members. In this context, understanding a startup ecosystem without considering government policy is conceptually flawed. This is particularly true in Korea, where the growth of the venture and startup sector has been largely government-driven.

The origins of government policy on venture business and entrepreneurship in Korea date back to 1980. However, full-scale efforts began in 1998, and over the past 25 years, such policies have swung between support and regulation.<sup>2)</sup> In 1996, Korea launched a new stock exchange market modeled after the NASDAQ—the second of its kind globally. The following year, Korea became the first country in the world to pass a special law for the designation and promotion of venture companies. However, the burst of the dot-com bubble and a series of ethical lapses within the venture sector eroded public trust. In response, the government intentionally distanced itself from venture-related activities. The focus of policy shifted toward “stabilization” and “maturation,” ushering in a regulatory “ice age” for the startup sector. Support was re-intensified in 2007 under the Lee Myung-Bak administration with its “One-person Creative Enterprise” initiative, and again in 2013 under the Park Geun-hye administration’s “Creative Economy” agenda. In 2017, the Small and Medium Business Administration (SMBA) was elevated to the Ministry of SMEs and Startups, and with the rise of mobile platforms, social media, and the Fourth Industrial Revolution, Korea began to experience what many describe as a “second venture boom.”

The Korean government initiated the development of startups and venture businesses, and over time—through a process of trial and error—the

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<sup>2)</sup> Youngtak Cho. “Will the Venture Boom of 2000 Return?” *Forbes Korea*, November 23, 2017.

startup ecosystem has become increasingly systematized and sophisticated. This chapter examines the evolution and significance of Korea's uniquely dynamic startup and venture policy landscape. It begins by reviewing the historical trajectory and current status of Korea's startup-related policies, followed by an analysis of their defining characteristics and the challenges that lie ahead.

## 1 Evolution of Startup Policy in Korea

### The Inception of Venture and Startup Policy

Until the 1970s, Korea's economic policy was heavily centered on large corporations and heavy industries. However, starting in the 1980s, the government began to explore entrepreneurship and small business development as a means to secure future growth engines. As part of this shift, two landmark pieces of legislation were enacted in 1986: the Support for Small and Medium Enterprise Startups Act and the Act on Financial Support for New Technology Businesses. The Support for Small and Medium Enterprise Startups Act, enacted on May 12, 1986, was Korea's first law dedicated explicitly to supporting new ventures. It provided a framework for direct government assistance, including investment, loans, and tax incentives for startup companies. More importantly, it established the legal foundation for the creation of Small and Medium Enterprise Startup Investment Companies and Startup Investment Associations, facilitating the flow of external capital into early-stage ventures. This law, through its accompanying enforcement decree, defined and regulated the scope of startup activities for more than 35 years. In 2020, the decree was amended to update the legal definition of "startup" to reflect the realities of the digital economy.

Meanwhile, the Act on Financial Support for New Technology

Businesses, enacted on December 26, 1986, was introduced to facilitate the provision of capital to technology-based enterprises. After undergoing nine amendments, the law was renamed in 2002 as the Technology Credit Guarantee Fund Act. As the revised title suggests, the legal foundation established by this act led to the separation of the Technology Credit Guarantee Fund (TCGF) from the Korea Credit Guarantee Fund in 1989. The TCGF played a critical role in fostering technology development and innovation by addressing a major structural gap in financing: the lack of collateral among early-stage technology firms. By issuing credit guarantees for companies with promising technologies but weak collateral profiles, the TCGF enabled these firms to secure loans from financial institutions, thereby supporting innovation-driven entrepreneurship.

### **Venture Policy Triggered by the IMF Crisis: A World-Leading Model**

Despite the enactment of key legislation to promote entrepreneurship in the 1980s, venture creation during that period remained relatively subdued. It was not until the mid-1990s—amid a deepening economic crisis culminating in the 1997 IMF bailout—that Korea’s startup and venture policy underwent a transformative shift. One of the most significant developments was the establishment of a dedicated government body. In the mid-1990s, a wave of bankruptcies among both conglomerates and their subcontractors intensified calls from political and business leaders for stronger support for small and medium-sized enterprises (SMEs). In response, President Kim, Young-Sam issued a special directive, and within one month, the Small and Medium Business Administration (SMBA) was launched in February 1996 to lead national venture support policy. The SMBA played a pivotal role in shaping Korea’s startup ecosystem through initiatives such as the Startup Incubation Policy and measures to revitalize the KOSDAQ market. Over time, its role as a central coordinating agency for startup policy expanded significantly, ul-

timately leading to its elevation in 2017 to the Ministry of SMEs and Startups.

The next major milestone was the creation of an exit market for venture firms—the launch of the KOSDAQ market in July 1996. Designed specifically to support startups and technology-based enterprises, the KOSDAQ eased listing requirements for venture companies, thereby providing a pathway for large-scale capital raising. It also attracted investors seeking high-risk, high-return opportunities, which in turn enabled long-term R&D investments by technology firms. By facilitating access to public capital, the KOSDAQ market played a critical role in fostering the growth of high value-added industries and improving overall investment returns. At its inception, the market listed 350 companies with a total market capitalization of approximately KRW 7.1 trillion. By the end of 2022, it had grown to 1,611 listed companies with a total market capitalization of roughly KRW 320 trillion.

Finally, in August 1997, a landmark piece of legislation was enacted to accelerate the development of startups and venture enterprises: the *Special Measures Act on the Promotion of Venture Businesses* (commonly referred to as the Venture Special Act). The law came into effect in 1998. At the time, the Kim Dae-Jung administration promoted a policy shift from a “chaebol-driven economy to a venture-driven economy” and positioned venture businesses as a central strategy for overcoming the IMF crisis. The government set a target to foster 20,000 venture firms and create 400,000 new jobs by 2002. The alignment between the government’s strategic direction and the enactment of the Venture Special Act marked a turning point, leading to the identification and active promotion of high-potential technology startups. Based on this legislation, the government launched a series of ambitious venture policies: it permitted greater investment in venture firms, enabled the formation of Korea Venture Investment Associations, prioritized credit guaran-

tees for venture and new technology companies, and introduced legal provisions for establishing specialized technology venture companies. The law also included tax incentives and regulatory exemptions to reduce entry barriers. The government's commitment to these initiatives was backed by capital: KRW 211.5 billion in startup funding was disbursed in 2000, followed by KRW 220 billion in 2001, out of the KRW 900 billion originally pledged for venture support. Additionally, the law permitted laboratories to be registered as factories, thereby institutionalizing the concept of "lab-to-market" startups.<sup>3)</sup> The late KAIST professor Lee, Min-Hwa praised this framework as "the most advanced model in the world."

### **Speculation, Scandal, and State Retreat: Integrity Challenges in Korea's First Venture Era**

As a result of a series of policy initiatives in the late 1990s, Korea rapidly transformed into a so-called "venture republic." By 2002, the total output of the IT sector had risen to KRW 189 trillion, accounting for 14.9% of GDP.<sup>4)</sup> Korea's IT trade surplus also surged to USD 16.8 billion in the same year, becoming a key driver in overcoming the aftermath of the IMF crisis. By 2001, venture companies were being established at a rate of 500 per month, contributing 3% of GDP, 4% of total exports, and 2% of overall employment – marking a period of dramatic growth. However, as the saying goes, "the higher the mountain, the deeper the valley." Entering the early 2000s, the venture sector and startup ecosystem began to exhibit a series of contradictions and systemic distortions.

Blind speculation became rampant, and expectations of overnight wealth grew unchecked. Soaring stock prices suddenly collapsed, sending the mar-

<sup>3)</sup> Taemin Ryu. "The Startup Ecosystem's Rising Status: Fueled by the Startup Boom." Asia Economy, June 19, 2023.

<sup>4)</sup> GyeHwan Cho. "The Venture Bubble Amid Korea's Rise as an Information Power." Hankyoreh21, August 27, 2009.

ket into panic. One of the most emblematic cases was Goldbank, which went public on KOSDAQ in 1998 with a business model that offered users money in exchange for viewing online advertisements. Its stock price skyrocketed by approximately 3,700% in just eight months but was eventually delisted due to allegations of stock manipulation. Another case was Saerom Technology, which promoted free internet calls. Its stock price rose 150-fold within six months of its 1998 listing, at one point exceeding a market capitalization of KRW 3 trillion. However, the CEO was later sentenced to prison for accounting fraud, and its shares ultimately became worthless. Fueled by euphoric expectations, the KOSDAQ index peaked at 2,834 points in early 2000 but plummeted to 443 points by the end of 2002, due to the collapse of the dot-com bubble and the fall of so-called “emperor stocks.”<sup>5)</sup>

Meanwhile, major corruption scandals emerged involving collusion between political and business elites. These included a series of high-profile financial gatekeeping scandals involving figures such as Hyun-Joon Jung, Seung-Hyun Jin, Tae-Sik Yoon, and Yong-Ho Lee. The credibility of the venture industry collapsed almost overnight, and a widespread perception took hold that venture businesses were synonymous with fraud. In response, the government suspended its support for venture development in its entirety.<sup>6)</sup> To be sure, the government later acknowledged the continued importance of the venture sector as a source of economic growth and job creation. In December 2004, it announced financial and tax policy measures to revitalize the sector and, in 2005, launched Korea Venture Investment Corp. to manage the formation of the national fund-of-funds. However, between 2004 and 2007, policy momentum stagnated. Rather than easing

<sup>5)</sup> Soyeon Kim. “Approaching the KOSDAQ 1,000 Era: A Nostalgic Look at the Bubble—Saerom Technology’s 150x Surge in Six Months.” *Newsday*, December 22, 2020.

<sup>6)</sup> Minhwa Lee. “Special Contribution from Venture Capital Pioneer Minhwa Lee: Concerns Over the Ho Chang-sung Incident Dampening the Startup Boom.” *Korea Economic Daily*, April 11, 2016.

constraints, the government introduced tighter regulations under the banner of “strengthening fundamentals.” For example, the previous system, under which more than 70% of venture firms had qualified based on technological certification alone, was eliminated. Instead, companies could only be recognized as venture firms after undergoing evaluation by designated institutions and securing guarantees or loans. This marked a fundamental shift in policy, making financial stability—rather than technological innovation—the primary criterion for accessing venture-related benefits.<sup>7)</sup>

### **The Second Venture Drive: Creating a Favorable Environment for Startups**

After years of distancing itself from the venture sector, the Korean government reintroduced pro-venture policies in the wake of the 2008 subprime mortgage crisis in the United States. In 2007, Korea’s per capita gross national income surpassed USD 20,000 for the first time in its history. However, the global financial crisis triggered by the U.S. housing market collapse caused per capita income to fall sharply to USD 19,296 in 2008 and further to USD 17,193 in 2009. In response, the need to reinvigorate the venture sector once again came to the forefront. The government moved to extend the Special Measures Act on the Promotion of Venture Businesses—originally set to expire after a 10-year period ending in 2007, having been introduced to overcome the IMF crisis. This marked the beginning of Korea’s second national venture policy roadmap. At that time, the introduction of the iPhone and the emergence of the mobile industry signaled the start of a new industrial paradigm. Recognizing this, the government aimed to position venture businesses in emerging industries as a new engine for economic growth.

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<sup>7)</sup> Taeho Hwang. “Government Emphasizes ‘Startup Support’ but Number of Venture Companies Stagnant for Three Years.” Dong-A Ilbo, June 9, 2014.

The government's top priority was to create a business environment conducive to entrepreneurship. The effort began with streamlining the startup process to make company formation easier. Starting in April 2008, the previous system—which required in-person visits to register a corporation—was replaced with an online application process that allowed founders to incorporate from home. The minimum capital requirement for incorporation was also abolished, making it possible to establish a legal entity with as little as KRW 100.<sup>8)</sup> As a result, incorporation costs dropped from KRW 1.3 million to just KRW 60,000, and the average time required to launch a business was reduced from 14 days to 5.<sup>9)</sup> To further expand access, especially for solo entrepreneurs, the government introduced the “One-Person Creative Enterprise Initiative” in March 2009, aiming to foster approximately 180,000 such ventures. This initiative was later institutionalized in April 2011 through dedicated legislation. In order to allow entrepreneurship even without initial technological expertise, government-led educational programs such as “App Creation Centers” and “Well-being Practice Labs” were launched. These programs culminated in 2011 with the establishment of a state-sponsored “startup academy” by the Korea Small and Medium Business Corporation (now KOSME), modeled after a military academy. This program—*Youth Startup Academy*—later produced prominent startups such as Toss and Zigbang.

The government also began to systematically dismantle structural barriers that hindered entrepreneurship—particularly those related to personal guarantees, which often placed not only founders but also their families and acquaintances at significant financial risk. A critical first step came in early 2008, when credit guarantee institutions exempted the spouses of company

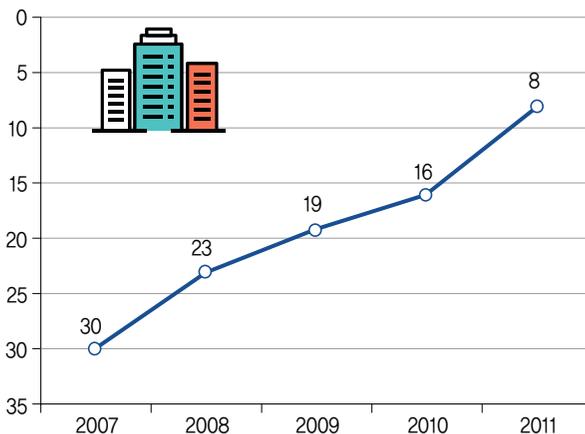
<sup>8)</sup> Pilgyu Baek (2016). “SME Policies of the Lee Myung-bak and Park Geun-hye Administrations.” *Journal of SME Policy Studies*, 2016(3), 124-165.

<sup>9)</sup> Weekly Gonggam, “Regulatory Reforms from the Perspective of Citizens and Companies.” *Korea Policy Briefing*, February 24, 2012.

representatives from joint liability obligations. Starting that same year, minority shareholders with less than a 10% equity stake in a corporation were no longer required to provide personal guarantees when the company secured corporate loans. In February 2012, the Financial Services Commission announced a series of measures aimed at promoting entrepreneurship and easing the operational burden on businesses. These included the elimination of third-party joint guarantees, as well as new provisions for the reduction of guarantor liabilities in specific cases. For example, if the principal debtor entered formal rehabilitation or bankruptcy proceedings in accordance with the law, co-guarantors would also be eligible for partial debt relief (April 2013, via amendments to the Technology Credit Guarantee Fund Act). Additional relief measures were rolled out, including the use of the National Happiness Fund to restructure joint debts (May 2013), and the reduction of legacy joint liabilities for SMEs that had gone bankrupt during the Asian Financial Crisis (July 2013).

The results of these policy efforts were both tangible and immediate: Korea’s overall business environment improved significantly. According to

**Figure 7-3** Korea's Business Environment Ranking



Source: World Bank

**Table 7-1** 2011 Business Environment Rankings

순위	국가
1	Singapore
2	Hong Kong
3	New Zealand
4	United States
5	Denmark
6	Norway
7	United Kingdom
8	Korea
9	Iceland
10	Ireland
20	Japan
91	China

the World Bank's *Doing Business* report, Korea's business environment ranking steadily rose after 2008, and by 2011, the country entered the global top 10 for the first time. Notably, the ranking for the "Starting a Business" category improved dramatically, jumping from 60th to 24th place—highlighting the effectiveness of reforms aimed at facilitating entrepreneurship.

### Toward a Private-Led Ecosystem

The core objective of Korea's second-phase venture policy, initiated in 2008, was to transition away from government-led initiatives and build a startup ecosystem driven by the private sector. This shift aimed to reduce policy noise and market distortion caused by excessive state involvement. A representative example of this transition was the government's effort to match its fund-of-funds (*government-backed Fund of Funds*) with private capital, thereby channeling private venture capital into the startup sector more organically. Despite these efforts, criticisms emerged—both domestically and internationally—that the ecosystem remained overly "supply-driven" and failed to evolve into a demand-led, advanced startup environment akin to those seen in more mature economies.<sup>10</sup> In response, the government recalibrated its approach, placing greater emphasis on public-private collaboration as a foundation for reshaping the startup ecosystem.

The first major initiative in building a private-led ecosystem was to form partnerships with universities. In 2011, the government launched the *Leading Startup University Program*, under the vision of transforming universities into entrepreneurial hubs. The Ministry of SMEs and Startups initially designated 15 universities to serve as end-to-end startup platforms—responsible for everything from discovering aspiring entrepreneurs to supporting their growth. Each university received approximately KRW 2 billion an-

<sup>10</sup> Mihui Kim. "Three Years of the Park Geun-hye Administration (Part 2) — Building a Private-Led Startup Ecosystem." *Financial News*, February 23, 2016.

nually in government funding. Designated institutions established independent startup support offices and began nurturing early-stage entrepreneurs through dedicated startup curricula and programs. Over time, the number of participating universities expanded, reaching 43 by 2018. Between 2011 and 2018, the program helped 5,398 individuals launch businesses and created 15,178 jobs.<sup>11)</sup> In 2019, the initiative was restructured into what is now known as the *Initial Startup Package* program.<sup>12)</sup>

While the university model focused on educational partnerships, the government also launched a broader, nationwide initiative to build regional startup hubs through a tripartite collaboration between the central government, local governments, and conglomerates. As shown in [Figure 7-4], the initiative established nonprofit foundations known as *Centers for Creative Economy and Innovation* (CCEIs) across all 17 provincial-level regions. In this model, each CCEI was paired with a designated conglomerate, which would serve as a lead mentor to support local startups. The centers were primarily funded through a 60:40 split between national and local government budgets, supplemented by contributions from large corporations and private donors. Beginning with Samsung's designation as the lead corporate partner for Daegu in September 2014, all 17 CCEIs were operational by the end of 2015. Participating corporations—including Samsung, LG, SK, and Hyundai Motor Group—collectively committed over KRW 1 trillion in funding through equity investments, loans, guarantees, and facility expenditures.<sup>13)</sup> Since 2015, the central government has allocated an average of KRW 35 billion annually, with local governments contributing around KRW 23 billion

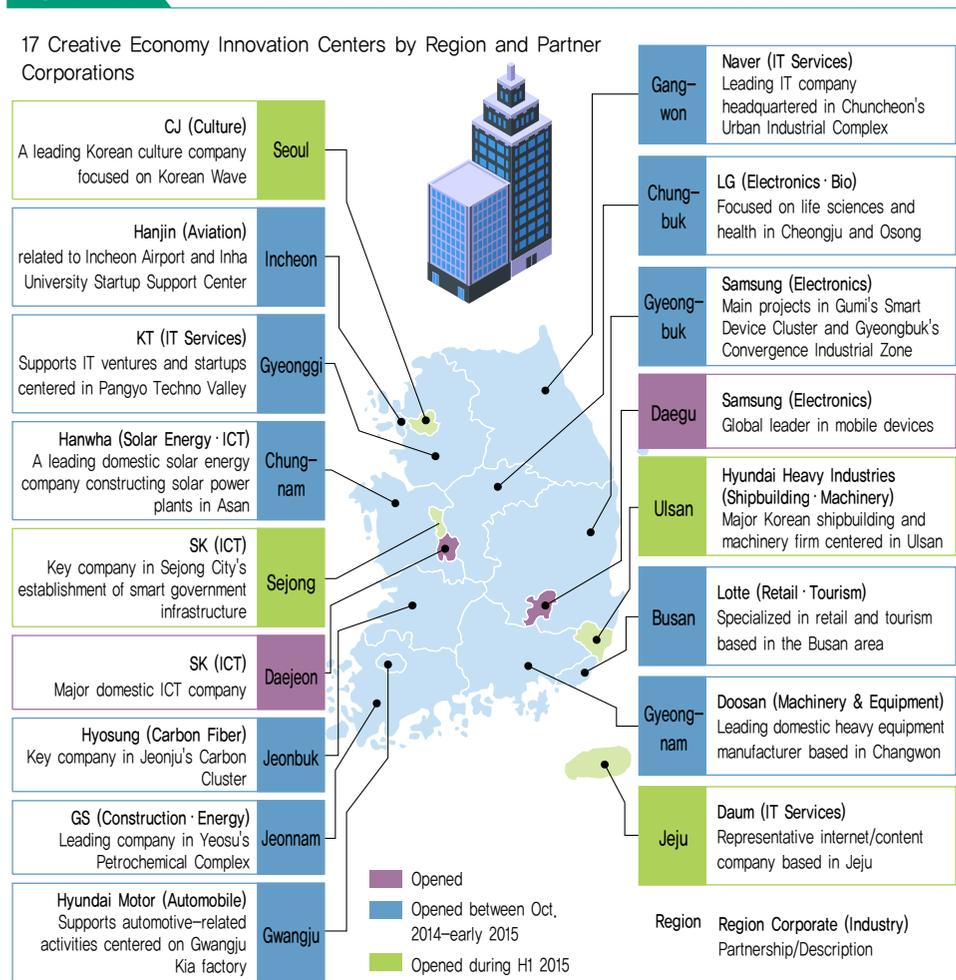
<sup>11)</sup> Minwoo Seo. "Innovative Ideas Meet University Infrastructure: Heating Up the Startup Ecosystem." *Seoul Economic Daily*, November 20, 2018.

<sup>12)</sup> The Early Startup Package program consolidated three previous programs: the Leading University Startup Support Program, the Smart Venture Campus, and the Generational Convergence Startup Campus.

<sup>13)</sup> Kyungho Choi. "Choi Soon-sil Scandal Deals a Blow: Creative Innovation Centers Lose Direction." *JoongAng Ilbo*, November 22, 2016.

per year. By 2022, more than 4,000 startups were supported through the CCEIs, cementing their status as regional hubs within Korea’s expanding startup ecosystem.

**Figure 7-4 Creative Economy Innovation Centers**



Source: The Blue House (now, Office of the President)

The government also decided to strengthen its collaboration with investment professionals who directly discover and fund startups. A prime exam-

ple of this approach is the *TIPS* (*Tech Incubator Program for Startup Korea*) initiative, launched in 2013.<sup>14)</sup> Inspired by Israel’s incubator model, TIPS is designed to leverage private sector expertise in early-stage startup selection while providing robust public sector support.

The core concept is simple yet powerful: once a designated private accelerator identifies a promising startup and makes an initial investment, the government steps in to provide additional support. Specifically, for every KRW 100 million invested by the private sector, the government offers up to KRW 500 million in R&D funding, KRW 100 million for commercialization, KRW 100 million for global marketing, and KRW 200 million in angel investment matching. This results in a highly favorable 1:9 leverage ratio—making TIPS one of Korea’s most ambitious and high-impact startup support programs.

**Table 7-2 | Status of TIPS Operator Organizations (as of June 2023)**

Type	Representative Cases	Count	Share (%)
Accelerators	Primer	44	39.3
Venture Capital	BonAngels, KB Investment	27	24.1
CVCs and Large Corps.	POSCO Technology Investment, Hyundai Motor Co.	15	13.4
University Technology Holding Company	POSTECH Holdings	15	13.4
Centers for Creative Economy Innovation	Chungbuk Creative Economy Innovation Center	8	7.1
Foundation	KAIST Entrepreneur Foundation, D-Camp	3	2.7
Total		112	100

Source: Korea Angel Investment Association

<sup>14)</sup> Myungkwan Lee. “Kim Young-tae, Architect of the TIPS Program, Emphasizes Need for Private Investment Incentives.” *The Bell*, August 23, 2022.

The government designated a group of startup investment experts—including venture capital firms, angel investors, and accelerators—as official *TIPS Operators*.<sup>15)</sup> Initially, ten reputable angel investment firms were selected as the first cohort of operators. Together, they identified 44 startup teams, which received a combined KRW 9.4 billion in angel investments and KRW 8.9 billion in government R&D support. As of the end of June 2023, a total of 112 organizations had been designated as TIPS Operators, supporting 2,134 startup teams under the program.<sup>16)</sup>

### Pursuing a Virtuous Cycle

While earlier efforts focused on building the startup ecosystem through private-sector collaboration, the next critical objective was to make the system sustainable. In practical terms, this meant ensuring smooth capital circulation across the entire lifecycle of startups—from founding, to exit, to reinvestment. To that end, the government, in coordination with relevant ministries, introduced the *Startup Capital Ecosystem Virtuous Cycle Plan* in 2013, with an emphasis on stage-specific interventions: startup, growth, exit, and reinvestment.

A key priority was to improve access to capital at the early startup stage, beginning with revitalizing angel investment. At the peak of the first venture boom in 2000, angel investment volume stood at KRW 549.3 billion, but by 2013, it had fallen to just KRW 55.6 billion—roughly 10% of its former level. To address this, the government introduced a *professional angel investor system* to stimulate investment leadership. Well-known founders and investors were given generous incentives such as automatic venture certification for portfolio companies and 2:1 government matching investment.<sup>17)</sup>

<sup>15)</sup> Seongeol Kim, Jaekwon Son, and Jeongbeom Kim. “Ultimate Startup Support: ‘TIPS’ Startup Town to Be Built by 2017.” Mael Business Newspaper, July 15, 2015.

<sup>16)</sup> Korea Business Angels Association. <https://home.kban.or.kr/>

<sup>17)</sup> In September 2014, the first professional angel certificates were awarded to 11 notable

Benefits were also extended to ordinary individual investors. Until 2013, a flat income tax deduction of 30% was available. Starting in 2014, the deduction rate was raised to 50% for investments of KRW 50 million or less, while the 30% rate was maintained for investments above that threshold.<sup>18)</sup> Following the implementation of these enhanced tax incentives, angel investment steadily recovered and, by 2018, returned to levels comparable to the previous peak.

**Table 7-3 | Angel Investment Status**

(Unit: KRW billion)

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Investment Amount	5,493	3,409	1,109	3,031	463	820	971	897	492	346
Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Investment Amount	341	428	557	556	959	1,862	2,259	2,671	5,412	4,612

Sources: Small and Medium Business Administration press releases (2012, 2016, 2018), Angel Investment Support Center

Meanwhile, to support startups that had not yet reached the angel investment stage, the government introduced a new crowdfunding system inspired by the U.S. JOBS Act.<sup>19)</sup> This effort culminated in the passage of a revision to the *Financial Investment Services and Capital Markets Act* (Article 117), which included provisions for online small-scale investment brokerage—commonly

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entrepreneurs and investors, including Taekkyung Lee (co-founder of Daum) and Junghee Ryu (founder of Olaworks). As of now, there are 282 certified professional angels.

**18)** In 2015, tax deductions applied as follows: 100% for investments up to KRW 15 million, 50% for investments between KRW 15 million and KRW 50 million, and 30% for investments above KRW 50 million. From 2018 onward, the system expanded to 100% for up to KRW 30 million, 70% for KRW 30–50 million, and 30% for investments above KRW 50 million.

**19)** The JOBS Act, enacted on April 5, 2012, consists of 7 titles and 23 sections. Title III addresses crowdfunding and exempts issuers from registration requirements for securities offerings under certain conditions.

referred to as the “Crowdfunding Act.” Passed in July 2015, the law took effect in January 2016. Immediately after its implementation, the volume of capital raised through equity crowdfunding grew rapidly—from KRW 16 billion in 2016 to KRW 39 billion in 2019—more than doubling in just three years. In parallel, the government launched a new stock market tailored to early-stage companies. On July 1, 2013, the *KONEX (Korea New Exchange)* was established through amendments to the *Capital Markets Consolidation Act*. The exchange was specifically designed for firms that did not meet the listing requirements of KOSDAQ. KONEX opened with 21 listed companies and a combined market capitalization of approximately KRW 500 billion.<sup>20)</sup> As of the end of 2022, a total of 87 companies had successfully transitioned from KONEX to KOSDAQ, establishing the market’s role as an incubation platform for scaling ventures. Consistent with its emphasis on building a virtuous cycle, the government continued to strengthen the startup ecosystem. It introduced a formal *accelerator registration system* and consolidated previously fragmented startup support policies across ministries under a unified brand—*K-Startup*—to enable integrated, one-stop support services. In terms of regulatory reform, the government pursued bold changes relative to past efforts. Notably, the *Special Measures Act on the Promotion of Venture Businesses*, which had been scheduled to sunset at the end of 2016, was extended for another ten years through a revised law passed by the National Assembly. This extension secured the legal foundation for sustaining startup ecosystem development through 2027.

### **The Fourth Industrial Revolution and the Second Venture Boom: Scaling Up and Unicorns**

While Korea was advancing its domestic startup ecosystem through pri-

<sup>20)</sup> As of 2023, 129 companies are listed, with a total market capitalization of approximately KRW 4.27 trillion and an average daily trading volume of KRW 2.28 billion.

vate-sector collaboration and capital circulation, the global technological landscape surrounding startups began to shift dramatically. New waves of innovation—most notably the Internet of Things (IoT) and artificial intelligence (AI)—heralded the arrival of what came to be known as the Fourth Industrial Revolution. In 2016, the AI program AlphaGo shocked the world by defeating professional Go player Lee Sedol in four out of five matches—an event that was broadcast globally. The following year, Intel acquired Israeli autonomous driving startup Mobileye for KRW 17 trillion (approximately USD 15 billion), signaling the rapid restructuring of entire industries. These changes were reflected in both the speed and scale of startup growth. The rise of “unicorns”—privately held companies valued at over USD 1 billion—accelerated at an unprecedented rate. Globally, the total market value of unicorns expanded from USD 21 billion in 2010 to USD 608 billion by 2016—a nearly 29-fold increase.<sup>21)</sup>

The concept of the Fourth Industrial Revolution also gained traction in Korea starting in 2017. Reports began to emerge showing that Korea’s technological capabilities in core areas of the Fourth Industrial Revolution ranked only 25th globally—estimated to be just 70–80% of the level seen in advanced economies.<sup>22)</sup> In response, the Korean government established the *Presidential Committee on the Fourth Industrial Revolution*, led by a private-sector chairperson. To enhance policy coherence and momentum in supporting startups, it was deemed necessary to consolidate fragmented policies across ministries. As a result, the *Small and Medium Business Administration* was elevated to the *Ministry of SMEs and Startups*, giving it ministerial status and the authority to participate in Cabinet meetings—thereby enabling more agile policy decisions.

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<sup>21)</sup> As of July 2024, the total number of unicorn companies worldwide is counted at 1,404.

<sup>22)</sup> Kyungchul Shin. “2018 Budget Proposal: KRW 1.5 Trillion Allocated for the Fourth Industrial Revolution ...Doubling TIPS Support.” Tax and Finance News, August 29, 2017.

While earlier policies focused primarily on supporting early-stage startups, the government's new approach expanded the scope to include *scale-up* support. In 2017, the majority of public funding was concentrated on companies within their first three years—5% for pre-startup preparation, 62% for initial startup, and 30% for early growth stages. However, with the announcement of the *Second Venture Boom Expansion Strategy* in 2019, the government explicitly declared its intention to shift toward supporting scale-ups. One of the first steps was to double the overall budget allocated to startup support. To facilitate a virtuous cycle of investment, exit, and re-investment, the government significantly expanded a variety of fund vehicles—including the *Innovation Startup Fund*, *Growth Support Fund*, and *Scale-Up Fund*. The *Startup Leap Package*, designed to support companies in their third to seventh year of operation, saw its program size doubled. In parallel, the budget for the government-backed *Fund of Funds* ('Fund of Funds') was increased from KRW 2.6 trillion to KRW 4.7 trillion, enabling broader and deeper financial support for scaling ventures.

Aligned with its scale-up strategy, the Korean government also began to formalize its efforts to cultivate unicorn companies. A national target was set to generate 20 unicorns by 2022. Beginning in 2020, the Ministry of SMEs and Startups launched the *K-Unicorn Project*, which introduced tiered programs such as *Baby Unicorn* and *Pre-Unicorn* initiatives. In parallel, the Ministry of Science and ICT initiated a *Global ICT Future Unicorn* development program. Recognizing that achieving unicorn status typically requires investment of at least KRW 100 billion, the government addressed long-standing criticisms that fragmented venture capital regulations were impeding large-scale funding. In response, it enacted the *Venture Investment Promotion Act* in 2020, which consolidated previously separate legal frameworks: the *SME Startup Investment Partnership* under the *Framework Act on Small and Medium Enterprises* and the *Korea Venture Investment Partnership*

under the *Venture Business Act*. The new law granted greater operational flexibility in fund formation and enabled accelerators and other startup planners to directly establish venture investment partnerships. As a result, the average annual size of venture fund formation, which stood at approximately KRW 4.5 trillion between 2017 and 2019, increased by KRW 2 trillion to KRW 6.5 trillion in 2020.<sup>23)</sup> Venture investment volume also reached a new

**Table 7-4 | Policy Developments Related to Startup Exits**

Year	Policy	Responsible Agency	Main Strategy	Key Measures
2017	Measures to Foster Innovation-Based Startup Ecosystem	Joint by Relevant Ministries	M&A	<ul style="list-style-type: none"> <li>Expand incentives for large corporations to participate in M&amp;As</li> <li>Support foreign capital to enter the domestic M&amp;A market</li> </ul>
2017	Measures to Revitalize the Startup Investment Market	Joint by Relevant Ministries	M&A	Improve infrastructure for small-scale M&As and fund formation
2019	Innovation Finance Promotion Plan	Joint by Relevant Ministries	IPO	<ul style="list-style-type: none"> <li>Establish industry-specific KOSDAQ listing standards</li> <li>Activate special listings for outstanding tech firms</li> <li>Allow fast-track transfer listing from KONEX to KOSDAQ</li> </ul>
2019	Strategy for Expanding the 2nd Venture Boom	Ministry of SMEs and Startups	M&A	<ul style="list-style-type: none"> <li>Activate M&amp;A support funds within Growth Ladder Fund</li> <li>Expand M&amp;A-dedicated funds</li> </ul>
2020	Amendment to the Monopoly Regulation and Fair Trade Act	Fair Trade Commission	CVC & M&A	<ul style="list-style-type: none"> <li>Ease ownership rules for CVCs</li> <li>Expand scope of permissible subsidiaries</li> </ul>
2021	Complementary Measures to Become a Top 4 Global Venture Power	Joint by Relevant Ministries	IPO & M&A	<ul style="list-style-type: none"> <li>IPO: Pre-IPO consulting for unicorns, fast-track reviews, tiered valuation system for tech firms</li> <li>M&amp;A: Establish M&amp;A guarantee programs, expand specialized M&amp;A funds/support centers, promote SPACs</li> </ul>

Source: Kim, Sun-Woo et al. (2021)<sup>25)</sup>

<sup>23)</sup> Ministry of SMEs and Startups, Press Release, January 28, 2021.

milestone, surpassing KRW 4 trillion for the first time in 2019. The number of unicorns grew substantially: from just 3 in 2017 to 15 by 2021, and 22 as of the first half of 2024. The number of *Pre-Unicorns*—unlisted companies valued at over KRW 100 billion—increased from 115 in 2017 to 235 in 2019, and 357 in 2021.<sup>24)</sup>

To enable the scale-up of startups, it was essential to strengthen exit opportunities—particularly by improving conditions for IPOs. One of the government’s key priorities was to make the listing process more accessible for high-growth, innovation-driven firms. For example, startups in Fourth Industrial Revolution sectors often struggled to meet the traditional performance-based listing requirements of KOSDAQ. In response, the government introduced new indicators that better reflected future growth potential and granted preferential treatment to high-tech companies, including exemptions from certain review procedures. KONEX-listed firms were allowed to raise capital through equity crowdfunding, expanding their financing options. For unicorn companies, pre-consultation and Fast-Track listing reviews were introduced. The listing process was further simplified by removing pre-evaluation steps based on market capitalization thresholds, enabling faster and more flexible IPO access. These reforms produced visible results. Among the top 20 companies listed by market cap at the end of 2000, only 6 were venture-backed. By the end of 2020, that number had more than doubled to 13. On the KOSPI as well, 4 of the top 20 companies were venture-backed firms.<sup>26)</sup>

Given persistent concerns that exit performance through M&A in Korea lagged significantly behind that of advanced economies such as the United

<sup>24)</sup> Ministry of SMEs and Startups, Press Release, May 14, 2020.

<sup>25)</sup> Kim Sun-Woo et al. (2021). Policy Transition and Design for SME and Venture Support After Covid-19. Science and Technology Policy Institute.

<sup>26)</sup> Kim Sun-Woo et al. (2021). Policy Transition and Design for SME and VentureSupport After Covid-19. Science and Technology Policy Institute.

States, the government moved to enhance its M&A-related policies. Under the *Second Venture Boom Strategy* launched in 2019, it expanded the M&A support function within the *Growth Ladder Fund* and created a dedicated *M&A Fund* within the government-backed *Fund of Funds*. In 2021, additional measures were introduced to strengthen the ecosystem further. These included doubling the size of existing M&A-focused funds and revitalizing the use of *Special Purpose Acquisition Companies* (SPACs) as a means for startups to achieve exit. Recognizing that conglomerates play a crucial role in enabling startup M&A activity, the government revised the *Fair Trade Act* in 2021 to allow general holding companies to establish *Corporate Venture Capital* (CVC) arms—previously restricted under Korea’s separation of banking and commerce principle. In the 18 months following the regulatory revision, 12 new CVC entities were launched by general holding companies, including GS Ventures, Hyosung Ventures, and Dongwon Technology Investment. Following this shift, not only conglomerates but also mid-sized companies, SMEs, and startups began registering new CVC entities. As of August 2022, a comprehensive government survey found that 141 out of 390 registered venture capital firms—approximately 36%—were classified as CVCs.

### **Digitization and Liquidity Triggered by COVID-19**

In the winter of 2019, the COVID-19 pandemic swept across the globe. By March 2020, the World Health Organization (WHO) officially declared a global pandemic. By June of that year, the number of confirmed cases worldwide had surpassed 10 million, and by September, the death toll had approached one million.<sup>27)</sup> As economies froze, unemployment rates soared. In Korea, job-seeking benefit applicants reached 710,000 in June 2020, and unemploy-

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<sup>27)</sup> As of September 2023, Covid-19 had been reported in 230 countries, with 690 million confirmed cases and 6.9 million deaths globally; in Korea alone, there were 34 million confirmed cases and 35,000 deaths.

ment benefits paid out exceeded KRW 1.1 trillion. With social distancing measures in full force, the so-called “*untact*” (non-contact) culture rapidly gained traction, accelerating the adoption of digital and contactless technologies across all sectors. Remote learning and telecommuting expanded significantly, and automation and unmanned systems began to take root across society.

To mitigate the economic shock from the COVID-19 crisis, the Korean government implemented an unprecedented fiscal response in 2020, allocating KRW 66.8 trillion across four rounds of supplementary budgets.<sup>28)</sup> This marked the first time in 72 years that more than two supplementary budgets were passed in a single year. Notably, the third supplementary budget—an extraordinary KRW 35 trillion injection—included KRW 2.7 trillion for the *Digital New Deal*, which focused on strengthening the D.N.A. ecosystem (Data, Network, and AI) and expanding contactless infrastructure.<sup>29)</sup> In the startup ecosystem, targeted measures combining the themes of COVID-19 recovery and digital transformation were swiftly introduced. In April 2020, the government expanded the startup loan program from KRW 1.6 trillion to KRW 2.1 trillion, adding KRW 500 billion in new funding. An additional KRW 400 billion was provided through the Korea Technology Finance Corporation (KOTEC) as COVID-specific credit guarantees for startups and venture firms. To accelerate venture fund formation and capital deployment, the government introduced a new *fast-closing* rule, allowing fund managers to begin investment activities once 70% of target capital commitments were

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<sup>28)</sup> First Supplementary Budget (March 18, 2020): KRW 11.7 trillion – Overcoming the Covid-19 Crisis, Second Supplementary Budget (April 30, 2020): KRW 12.2 trillion – Nationwide Emergency Relief Payments, Third Supplementary Budget (July 3, 2020): KRW 35.1 trillion – Leading the Post-Covid Era, Fourth Supplementary Budget (September 23, 2020): KRW 7.8 trillion – Selective Support for Covid-19 Damage.

<sup>29)</sup> The Digital New Deal, announced between May and July 2020, is one of the pillars of the Korean New Deal policy, aimed at accelerating digital transformation in response to the Covid-19 crisis.

secured—compared to the previous 100% threshold.<sup>30)</sup> In the third supplementary budget of July 2020, KRW 580 billion was earmarked specifically to support startups in the non-contact economy and to build remote work infrastructure for SMEs.<sup>31)</sup> These fiscal measures were reinforced through the *Comprehensive SME Development Plan* in October 2020 and the *Startup Support Plan* in August 2021, both of which emphasized fostering digital and next-generation industry ventures.

Fueled by emergency stimulus measures tied to COVID-19 and accelerated digitization, venture and startup investment vehicles in Korea saw explosive growth in 2020. That year alone, investment partnerships totaling over KRW 10 trillion were formed.<sup>32)</sup> This momentum intensified in subsequent years. In both 2021 and 2022, the total amount of newly formed venture investment funds nearly doubled, exceeding KRW 17 trillion—KRW 17.7 trillion in 2021 and KRW 17.6 trillion in 2022. Actual investments also hit historic highs. When combining venture capital partnerships, new technology investment partnerships, and other forms of government-backed financing, total capital deployed reached KRW 17 trillion in 2021—the highest annual investment on record. These figures are consolidated across the Ministry of SMEs and Startups and other relevant government agencies, as presented in [Table 7-5].<sup>33)</sup>

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<sup>30)</sup> Ministry of SMEs and Startups, Press Release, April 2020.

<sup>31)</sup> Ministry of SMEs and Startups, Press Release, June 2020.

<sup>32)</sup> Newly established venture capital funds totaled approximately KRW 6.5 trillion in 2020, KRW 9.2 trillion in 2021, and KRW 10.7 trillion in 2022. Other funds, including new technology investment associations and policy financial institutions, totaled approximately KRW 3.6 trillion in 2020, KRW 8.5 trillion in 2021, and KRW 6.8 trillion in 2022.

<sup>33)</sup> Since 2019, the Private Venture Investment Council, led by the Korea Venture Capital Association, has been compiling and announcing annual investment statistics.

**Table 7-5 | Aggregate (Cross-Ministry) Venture Investment Performance (2019-2022)**

Category	2019	2020	2021	2022
Venture Investment Fund Total Investment (₩00M)	42,777	43,045	76,802	67,640
Growth Rate (%)	-	△,6%	△8,4%	▼1,9%
Other Funds and Policy Finance Institutions (₩00M)	39,973	47,770	93,456	68,505
Growth Rate (%)	-	△9,5%	△5,6%	▼6,7%

Sources: Korea Venture Capital Association (KVCA), research team recompiled

## 2 Key Characteristics of Korea's Startup Policy

### The Venture Certification System

One of the most distinctive features of Korea's startup policy ecosystem is the venture certification system. Under this framework, companies that are officially certified as "venture businesses" receive substantial support from the government. This certification system was established under the Special Measures Act for the Promotion of Venture Businesses enacted in 1997, which first defined the term "venture business" and outlined three qualifying criteria. Companies that meet any one of the following are eligible for certification: First, venture capital - funded enterprises are those in which more than 10 percent of the company's paid-in capital has been invested by a venture capital firm, with a minimum investment of KRW 50 million. Second, R&D-oriented enterprises are those that invest at least KRW 50 million annually in research and development, with R&D expenditures accounting for 5 to 10 percent of total revenue depending on company size. Third, technology evaluation and credit guarantee enterprises are those that receive a loan or financial guarantee based on a favorable evaluation of their

proprietary technology by either the Korea Technology Finance Corporation (KOTEC) or the Korea SMEs and Startups Agency (KOSME), and where the guaranteed loan exceeds a certain threshold.

Companies that meet one of the above criteria and receive official venture certification from the government gain access to extensive benefits. [Table 7-6] outlines the types of support provided to certified venture firms under the Special Measures Act for the Promotion of Venture Businesses. This kind of certification-based support system is rare even by global standards.<sup>34)</sup>

**Table 7-6 | Support for Certified Venture Firms**

Venture Special Measures	Key Implementation Details
Funding Support	<ul style="list-style-type: none"> <li>• Direct support for early-stage ventures (e.g., equity participation and investment)</li> <li>• Allow pension funds to invest in venture companies</li> <li>• Tax exemptions for individuals (e.g., angels) and venture funds investing in startups</li> </ul>
Talent and Technology Support	<ul style="list-style-type: none"> <li>• Military service alternative program for technical personnel</li> <li>• Introduction of stock option system to attract and retain high-skilled talent</li> <li>• Government ministries and public venture investment institutions can provide R&amp;D funding to tech-based SMEs including ventures</li> </ul>
Facility/Space Support	<ul style="list-style-type: none"> <li>• Professors and researchers allowed to establish experimental labs and factories</li> <li>• Tax reduction or exemption and facility usage fee relief for dedicated venture facilities</li> </ul>

Source: Korea Venture Industry Development Survey (2000)

The venture certification system has undergone four major revisions to date—in 2002, 2006, and 2021. [Table 7-7] summarizes the evolution of the venture certification framework. First implemented in May 1998, the system

<sup>34)</sup> In 1995, Japan enacted the Temporary Measures Law for the Promotion of Creative Business Activities, supporting certified SMEs (with R&D expenditures exceeding 3%) designated by local governments. France launched an innovation plan in 2003, offering three years of full tax exemptions and social contribution reductions for companies less than seven years old with R&D expenditures exceeding 15% of total costs.

led to the certification of approximately 11,400 venture firms within its first three years, effectively catalyzing Korea’s initial “venture boom.” In 2002, the responsibility for evaluating and certifying venture businesses, which had been managed centrally by the Small and Medium Business Administration (SMBA), was decentralized. The evaluation functions were delegated to the Korea SMEs and Startups Agency (formerly the Small and Medium Business Corporation), Korea Technology Finance Corporation (KOTEC), and 13 other public institutions.

In 2006, one of the original certification criteria—qualification as a new technology enterprise—was removed. Instead, firms receiving guaranteed loans through the Korea Technology Finance Corporation were added as a new certification category. Following the 2020 amendment to the Special Measures Act for the Promotion of Venture Businesses, responsibility for certifying venture firms was transferred from public institutions to a newly

**Table 7-7 | Venture Certification System by Time Period**

1997–2001		2002–2005		2006–2020		2021–to present	
Type	Evaluation Agency	Type	Evaluation Agency	Type	Certification Agency	Type	Certification Agency
Venture Capital	Local SME Agency	Venture Capital	Korea SMEs and Startups Agency	Venture Capital	Korea Venture Capital Association	Venture Capital	Venture Certification Committee
R&D		R&D	Korea Technology Finance Corporation (KOTEC)	R&D	KOTEC and Korea SMEs and Startups Agency	R&D	
New Tech		New Technology / Pre-Venture	2002: 13 institutions 2003–2005: 16 institutions	Tech Evaluation Loan		Innovation-Based Growth	
Excellent Technology Evaluation				Pre-Venture			

established Venture Certification Committee composed of private-sector experts. At the same time, the guaranteed loan category introduced in 2006 was eliminated and replaced with a new category focused on innovative growth.

As a result of these changes, the share of new venture certifications under the venture capital - funded and R&D-oriented categories rose to 18.9 percent and 10.8 percent, respectively—roughly doubling compared to previous levels. This helped mitigate the concentration of certifications within a limited number of categories.

This certification system has influenced the design of several other related policy instruments. For instance, the Act on Support for Women-Owned Businesses, enacted in 1999, introduced an official certification for “women-owned enterprises.” Once certified, these businesses became eligible for a range of preferential benefits, including additional points in public procurement, favorable loan interest rates, reduced guarantee fees, and various forms of financial assistance. Similarly, the Social Enterprise Promotion Act of 2007 adopted a certification-based approach for social enterprises. By offering substantial support to certified social enterprises, the government was able to rapidly scale the ecosystem, fostering the development of approximately 2,500 certified social enterprises in a relatively short period.

The venture certification system offers the advantage of enabling rapid growth in the venture sector by concentrating policy support in a short period—especially in high-tech industries where market failures are more likely due to information asymmetries, high levels of intangible assets, and investment risk. However, the system also has notable drawbacks. Because certification relies on external evaluations, it may fall short in accurately identifying truly innovative firms. Moreover, as the certification is state-sanctioned, it can create an excessive signaling effect, potentially overstating the credi-

bility of certified firms. Reflecting these concerns, the OECD recommended in 2003 that Korea discontinue its venture certification program.<sup>35)</sup>

### Government as a Catalytic Investor

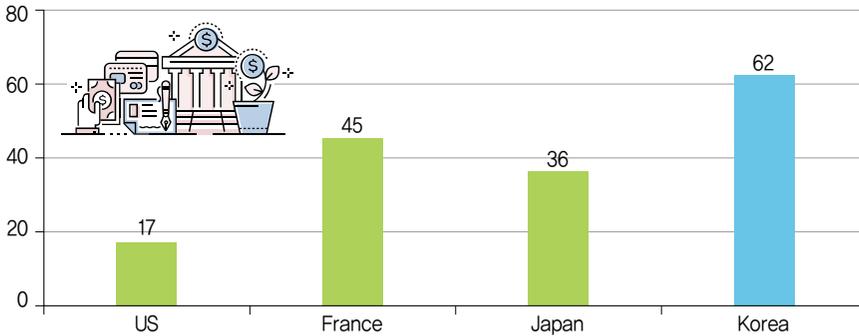
The Korean term *majungmul* refers to the small amount of water poured into a dry pump to prime it for drawing water. In Korea's venture and startup policy landscape, one of the most distinctive features is the government's role as a catalytic, or priming, investor. In December 2004, as part of a major initiative to revitalize the stagnant venture ecosystem, the government introduced an aggressive support package that included a KRW 1 trillion government-backed fund-of-funds (the "Fund of Funds"), a second-chance investment program, and KRW 10 trillion in credit guarantees. The Fund of Funds was established under the Special Measures Act for the Promotion of Venture Businesses and is financed by eight government ministries. To manage the fund, Korea Venture Investment Corp. was launched in 2005. With an operating horizon of 30 years, the fund started with an initial capital of KRW 170.1 billion in 2005. As of March 2023, the Fund of Funds has accumulated KRW 8.9 trillion in total capital. Over its 18-year history, the fund has led to the formation of 1,143 daughter funds, which collectively raised KRW 37.7 trillion by March 2023.

[Figure 7-5] illustrates the share of government-backed capital in total venture capital investment across major countries. Compared to the United States (17%), France (45%), and Japan (36%), Korea's reliance on government capital is significantly higher, reaching 62%. This indicates a notably greater degree of public sector involvement in Korea's venture capital market than in other advanced economies.<sup>36)</sup>

<sup>35)</sup> SME Administration Innovation Enterprises Team. "Venture Certification System Restructured to Be Market-Friendly." KDI Economic Information Center <http://epic.kdi.re.kr> (September 3, 2005).

<sup>36)</sup> Minkyoo Hwang. "The Fragile Side of the Startup Boom ... Only 6% of Companies Achieve

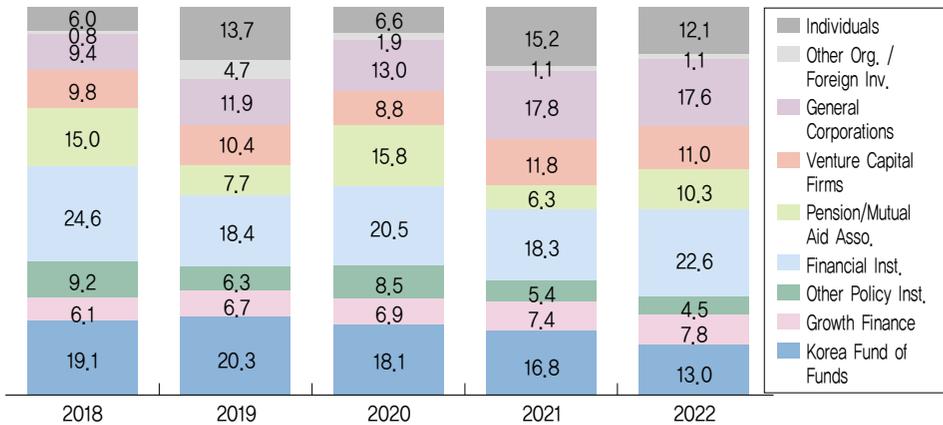
**Figure 7-5 Government Share of Venture Capital by Country**



Source: Statistics Korea

**Figure 7-6 Composition of Venture Capital LPs (2018-2022)**

(UNIT: %)



Source: Venture Capital Association

[Figure 7-6] presents the composition of major Limited Partners (LPs) in Korea’s venture funds. In the case of newly established funds in 2022, the Korea Fund of Funds accounted for 13%, while Growth Finance and other policy finance institutions together contributed 12.3%. Financial institutions represented 22.6%, and pension funds and mutual aid associations ac-

High Growth.” Chosun Ilbo, March 10, 2020.

counted for 10.3%. These figures indicate that the Korean government's direct and indirect contribution to venture capital remains substantial, totaling approximately 58.2%.

### Venture Discovery and Support

The government has played an active role in identifying and nurturing venture firms, both directly and indirectly. One key method is through indirect support for commercialization via a network of intermediary organizations. For example, the “Initial Startup Package” selects approximately 900 startups within three years of founding and provides up to KRW 100 million (average KRW 70 million) in funding. In 2023, this program was implemented through 20 designated lead institutions, including 14 universities, 4 Centers for Creative Economy and Innovation (CCEI), 1 public corporation, and 1 accelerator. Similarly, the “Pre-Startup Package,” which targets around 1,500 aspiring entrepreneurs and offers up to KRW 100 million in commercialization funding, was operated in 2023 by 25 lead institutions, including 14 universities and 11 CCEIs.

Rather than outsourcing to external organizations such as universities or innovation centers, the government also directly selects, supports, and nurtures startups through relevant public institutions. A representative example is the “Tourism Venture Program,” jointly administered by the Ministry of Culture, Sports and Tourism and the Korea Tourism Organization. Launched in 2011, this ongoing program aims to identify and support innovative business ideas in the tourism sector, offering up to KRW 100 million in funding. In 2023, a total of 988 companies applied, with 140 selected, reflecting a competitive selection ratio of 7 to 1.

The government has also taken a direct role in identifying and nurturing startup founders. One of the most prominent examples of such a “direct discovery” initiative is the *Youth Startup Academy*. Operated by the Korea SMEs

and Startups Agency (KOSME), this academy follows a “military school” model for startups, beginning in the Seoul metropolitan area (Ansan) and later expanding to five regions nationwide: the Honam region (Gwangju), Daegu - Gyeongbuk (Gyeongsan), Busan - Gyeongnam (Gimhae), and the Chungcheong region (Cheonan). [Figure 7-7] shows the geographic distribution of Youth Startup Academy campuses across Korea.

**Figure 7-7** Current Status of Youth Startup Academy Nationwide



The Youth Startup Academy is designed to identify high-potential entrepreneurs under the age of 39 and provide comprehensive, package-based support. Over the past 12 years, it has established itself as Korea’s flagship platform for fostering youth-driven and technology-oriented entrepreneur-

ship. By 2020, the academy had graduated 5,482 young entrepreneurs, generated a cumulative business performance of KRW 5.0768 trillion, and created 17,823 new jobs. Notably, it has produced unicorn companies such as *Zigbang* (Cohort 1) and *Viva Republica* (Cohort 2), marking it as one of the most successful public-sector initiatives in venture discovery and support.

In contrast, there are cases where the government plays a minimal role and delegates full responsibility for startup support to private-sector experts. A leading example is the TIPS (Tech Incubator Program for Startup Korea) initiative, which operates under the principle that if private investors commit capital, the government will trust their judgment and provide matching support. While TIPS was first launched in 2013, two complementary programs—Post-TIPS and Pre-TIPS—were introduced in 2018 to address later- and earlier-stage startup needs, respectively. Post-TIPS targets successful TIPS graduates that have secured follow-on private investment of at least KRW 1 billion. These firms are eligible to receive an additional KRW 500 million in government support to further accelerate commercialization. Conversely, Pre-TIPS supports startups at the earliest stages by offering up to KRW 100 million in government funding to those that have raised at least KRW 10 million in seed capital from private investors. These programs have helped bridge critical funding gaps and enhance the pipeline of scalable startups in Korea’s venture ecosystem.

### **Fostering a Culture of Entrepreneurship and Innovation**

The Korean government has actively taken the lead in cultivating a culture of entrepreneurial risk-taking. A flagship initiative in this effort is the “BizCool” program. Launched in 2002 and targeted at youth, BizCool has significantly expanded over the years. As of January 2018, the program was operating in 2,735 schools nationwide, reaching approximately 1.5 million students. It had conducted 165 BizCool camps with 13,736 participants, sup-

ported 12,469 entrepreneurship clubs involving 170,141 students, and facilitated research by 6,980 teachers. Specifically, the BizCool program promotes entrepreneurial mindsets and practical startup skills among students through entrepreneurship and financial literacy education, startup club activities, guest lectures by professionals, and experiential learning events such as BizCool Camps and BizCool Festivals. To ensure sustainability and quality of instruction, the program also supports professional development for educators, including teacher training sessions and the development of specialized curricular content.

The government also made significant efforts to reduce the fear of failure, which had long been a major psychological barrier to entrepreneurship in Korea. A key policy milestone in this regard was the abolition of joint surety. Historically, Korean entrepreneurs seeking loans were often required to secure joint guarantees from themselves, their family members, or close acquaintances, putting personal networks at substantial financial risk in the event of business failure. This practice had been widely criticized as a structural deterrent to entrepreneurship. After extensive policy deliberation, joint surety for corporate representatives was officially abolished in 2018. The impact of this reform was immediate. According to the 2019 Global Entrepreneurship Monitor (GEM) survey, public fear of failure associated with starting a business declined significantly. Furthermore, the number of new startups rose sharply—from 1.15 million in 2016 to 1.48 million in 2020, representing a 29% increase.

### 3 Challenges in Korea's Startup Policy

#### Transition from Government-Led Initiatives to Public-Private Collaboration

The quality and volume of Korea's startup policies have steadily improved over the years. Notably, the Ministry of SMEs and Startups has expanded its coordination with other government agencies, and approximately 40% of startup-related initiatives now involve the joint participation of at least two ministries or agencies.<sup>37)</sup> This high degree of interagency collaboration also underscores the extent to which the ecosystem remains government-led. Table 7-8 outlines the number of policy announcements related to entrepreneurship and startups by year. From 2013 to 2017 alone, 78 startup-related policies were announced—an average of roughly 14 per year.

Government funding for startup support has also expanded rapidly. In 1998, the total startup support budget was less than KRW 10 billion. By 2019, that figure had surpassed KRW 1 trillion, and since 2020—excluding

**Table 7-8 | Government Announcements on Entrepreneurship and Startups by Period**

Period	Number of Government Announcements
1981–1992	0
1993–1997	6
1998–2002	14
2003–2007	15
2008–2012	24
2013–2017	78
2017–2020	65

Source: Kang, Jae-won (2020)

<sup>37)</sup> Jaewon Kang (2020). Scenario Analysis of the Startup Ecosystem. Korea Small Business Institute.

special loan provisions related to COVID-19—the annual budget has consistently exceeded KRW 1.5 trillion. Table 7-9 presents the annual trends in startup support expenditures. The number of startup-related programs managed by both central and local governments (including metropolitan and municipal levels) has also increased significantly, from 65 programs in 2016 to 426 in 2023—a sevenfold rise.

**Table 7-9 | Annual Budget for Startup Support**

Year	Commercialization	R&D	Facilities Spaces	Startup Education	Mentoring	Events	Other	Global	Loans	Total (100 million KRW)
2016	2,213	2,488	284	198	282	32	266			5,763
2017	2,870	2,154	300	302	347	34	151			6,158
2018	3,214	2,780	977	603	180	43				7,796
2019	5,131	3,797	1,494	471	222	67				11,180
2020	7,315	5,126	1,259	535	217	64				14,517
2021	8,745	4,207	1,080	828	229	90				15,179
2022	9,132	4,639	1,549	569	272	288			20,220	36,668
2023	8,168	4,546	1,569	708		206	470	865	20,075	36,607

Sources: K-Startup

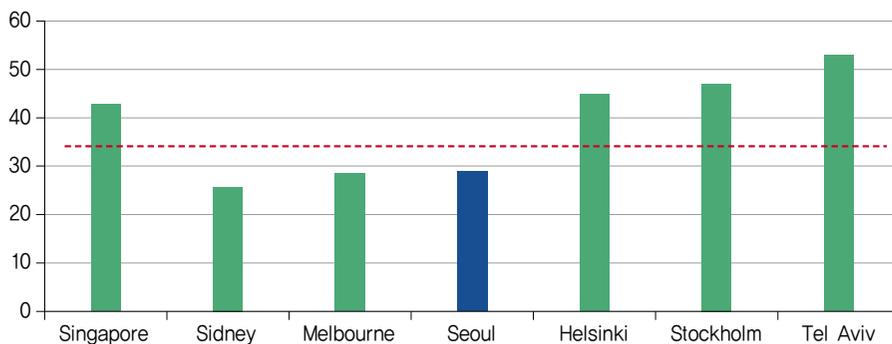
It is undeniable that Korea’s startup ecosystem has grown significantly under the leadership and proactive initiatives of the government. However, excessive government-led approaches risk stifling private-sector creativity and autonomy. This concern is particularly relevant in the era of the Fourth Industrial Revolution, where leveraging private-sector expertise is critical. As such, there is a pressing need to refine Korea’s startup policy framework by shifting from a government-dominant model to one that strengthens public-private partnerships, thereby enabling a more dynamic and self-sustaining startup ecosystem. A successful example of this policy evolution is the TIPS

program. By relinquishing control and establishing a robust collaboration framework with private actors, the government allowed the market to take the lead in startup selection and investment. As of the end of 2022, over 2,100 startups supported through TIPS—each initially backed by private investors—have collectively raised KRW 10.4 trillion in follow-on funding. Of these, 11 companies have successfully completed IPOs and 61 have achieved exits through M&A.

### Urgent Need to Elevate Global Competitiveness

Given that exports have long been the primary driver of Korea’s economic growth,<sup>38)</sup> the domestic market remains relatively small compared to other OECD countries. This structural limitation implies that Korean venture startups must target international markets to achieve high performance. According to the 2021 Venture Business Survey, globally oriented ventures—defined as those with over 20% of revenue from exports—saw employment increase by 33.7% and revenue by 25.9%. In contrast, ventures focused on the domestic market experienced a 4.8% decline in employment.

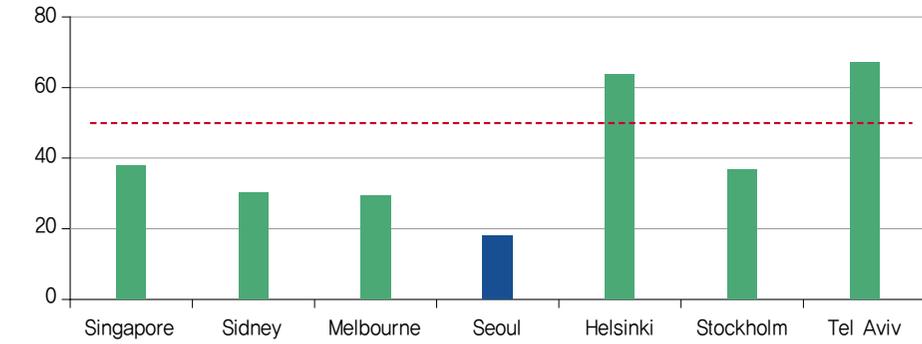
Figure 7-8 Global Market Reach (UNIT: %)



Source: Startup Genome, 2021

<sup>38)</sup> Exports account for approximately 35% of Korea’s GDP.

**Figure 7-9 Global Market Priority Strategy** (Unit: %)

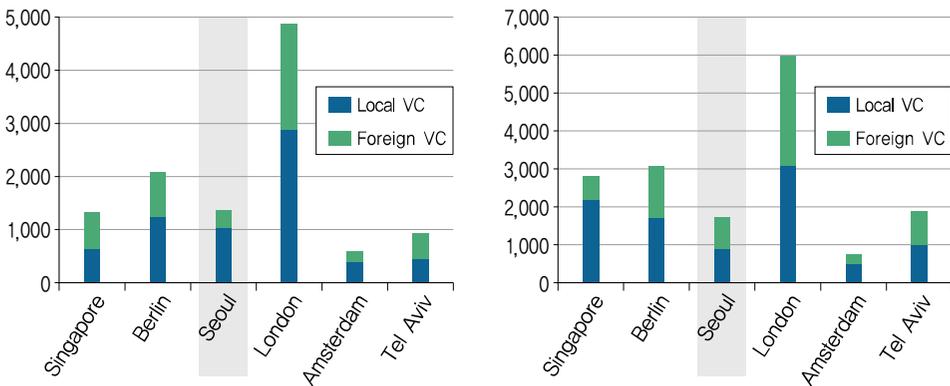


Source: Startup Genome, 2021

Despite this reality, a paradox persists: Korea’s startup ecosystem remains structurally weak in terms of global reach. According to data from Startup Genome, Korean startups consistently underperform in both accessing global markets and formulating effective internationalization strategies when measured against global standards.

Not only is Korea’s outbound engagement with global markets under-

**Figure 7-10 No. of Domestic & Foreign Venture Capital Deals and Investment Amounts (2010-2021)**



(a) No. of Domestic & Foreign VC Deals (Count)

(b) Domestic & Foreign VC Investment Amount (USD)

Source: Startup Genome, 2021

developed, but inbound participation by foreign actors in the domestic start-up ecosystem also remains low. For example, as shown in [Figure 7-10], only about 24% of venture capital deals in Korea involve foreign venture capital firms, underscoring the limited presence of international investors.

Foreign entrepreneurship in Korea is similarly rare. According to a 2017 survey conducted by the Presidential Committee on Young Generation and the Science and Technology Policy Institute, only 10.1% of 306 international students surveyed expressed intentions to launch a startup in Korea. The primary deterrents cited were lack of market knowledge, visa-related challenges, and overall uncertainty. This is reflected in the fact that over the past decade, a mere 230 startup visas have been issued. As previously discussed, Korea must take a clear-eyed view of the current limitations of its startup ecosystem and prioritize strategies to enhance its level of global integration and competitiveness.

### **Resolving Conflicts Between Emerging and Traditional Industries**

For Korea's startup ecosystem to reach a higher level of sophistication, constructive resolution of conflicts between emerging industries and traditional sectors is essential. As the Fourth Industrial Revolution accelerates and digitalization deepens, friction has increasingly surfaced between newly emerging startups and incumbent players in traditional industries. A representative case is the conflict between the rental car-based ride-hailing service "Tada" (operated by VCNC) and the traditional taxi industry. Following the launch of Tada, taxi unions staged continuous protests over what they framed as threats to their livelihoods. In response, the government amended the Passenger Transport Service Act—legislation that had served as the legal foundation for Tada's business model. The revised law, widely referred to as the "Tada Ban Law," was passed by the National Assembly in March 2020, effectively siding with the taxi industry.

Other high-profile examples include the 2021 dispute between the Korea Association of Realtors and real estate platform Zigbang over the latter's entry into real estate brokerage, which escalated to the point that, in October 2022, 24 lawmakers across party lines proposed an amendment to the Licensed Realtors Act. Similarly, legal-tech startup LawTalk has faced opposition from the Korean Bar Association, beauty treatment platform Gangnam Unnie has clashed with medical associations, and tax-filing platform Samjeomsam has drawn criticism from tax accountants. These cases exemplify the growing tensions between digital platform-based startups and entrenched professions. Despite the government's public emphasis on digital transformation and nurturing high-tech startups, its approach to conflicts involving digital platforms has largely defaulted to cautious, regulation-heavy responses. In fact, regulatory measures targeting platform businesses have steadily expanded through legislation. For example, the Korea Fair Trade Commission amended the E-Commerce Act in 2021 to introduce joint liability for platform operators in cases of consumer disputes. Though this move was criticized for being out of sync with global trends, the amendment passed the National Assembly in February 2023.

If legal regulation continues to serve as the default method for resolving conflicts arising from the emergence of new industries, such an approach may inhibit corporate innovation and function as a significant barrier to startup entry. Empirical studies show that the greater the number of procedural requirements before launching a new business, the lower the rate of new firm formation.<sup>39)</sup> Excessive regulation can also cause countries to miss the golden time for entering new markets, ultimately eroding national competitiveness. A notable example is the simultaneous market entry of Korea's KG Inicis (then Inicis) and the U.S.-based PayPal. While both firms en-

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<sup>39)</sup> Djankov, S., La Porta, R., Lopez-de-Silanes, F. & Shleifer, A. (2002). "The regulation of entry." *The Quarterly Journal of Economics*, 117(1), 1-37.

tered the online payments space around the same time, the growth of Korea's fintech sector was stunted by domestic regulatory constraints. In many cases, regulation ultimately results in net consumer loss. In the case of Tada, the Ministry of Land, Infrastructure and Transport, which led the legislative amendment that banned Tada's business model, argued that legal enforcement would create stronger foundations for similar services. However, following the law's passage, Tada was forced to shut down. Ironically, the taxi industry—widely seen as having prevailed over Tada—continued to suffer from a prolonged economic downturn.<sup>40)</sup> The outcome was not a clear victory for one side, but mutual decline.

In October 2017, Korea introduced the concept of a “comprehensive negative regulatory system” by releasing the “Guidelines for Identifying Negative Regulations in New Industries.” Negative regulation refers to a regulatory approach where activities are permitted in principle and only explicitly prohibited in exceptional cases. It encompasses concepts such as ex post regulation, minimal intervention, and broad regulatory interpretation. The motivation behind this shift was to improve the country's capacity to embrace innovation, as traditional regulation frameworks tend to delay the adoption of novel technologies and are ill-suited to address the convergence of industries arising from the Fourth Industrial Revolution. However, Korea's legal system, rooted in the continental civil law tradition, presents significant challenges to the practical implementation of such a regulatory paradigm. Unlike common law systems that allow for broader interpretive flexibility, the Korean administrative philosophy has historically leaned toward prescriptive, ex ante controls. As a result, a gap has emerged between the envisioned regulatory model and its practical execution. To close this

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<sup>40)</sup> According to a Korea Economic Daily article dated September 17, 2023, the operation rate of 254 corporate taxi companies in Seoul has fallen to the 30% range, marking a historic low.

gap, both central and local government regulatory authorities must deepen their understanding of the philosophy behind negative regulation. Moreover, they must adopt a more forward-looking and pragmatic approach in addressing the regulatory implications of emerging technologies and innovation-driven industries.



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## Chapter 8

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# Regional Startup Ecosystems in Korea

1. Why Regional Startup Ecosystems Matter?
2. How are Regional Startup Ecosystems Measured?
3. Which Cities are Most Conducive to Startups?
4. Is Korea's Regional Startup Ecosystem Growing?
5. Strategies for Fostering Regional Startup Ecosystems

Around the world, people are gravitating toward cities that are favorable for startups. A “startup-friendly city” is characterized by the concentration of knowledge and capital, rapid dissemination of information, and well-developed infrastructure and services in areas such as education, culture, and welfare. These environments foster dynamic entrepreneurial interactions that generate new ideas and drive prosperity in the era of digital transformation.

In Korea, the startup ecosystem is heavily concentrated in the Seoul metropolitan area. Therefore, efforts to revitalize regional startup ecosystems not only serve to broaden the national startup landscape but also offer a strategic solution to addressing regional disparities across political, economic, educational, and cultural dimensions.

This chapter explores why regional-level startup ecosystem development is critical, how regional ecosystems can be evaluated, and what existing research reveals. It also identifies which cities are most conducive to startups and examines the growth of Korea’s regional startup ecosystems compared to 2017. Finally, it presents the cases of Daejeon and Pohang—two emerging technology-driven startup hubs—as a basis for identifying future directions for strengthening regional startup ecosystems.

## **1** Why Regional Startup Ecosystems Matter?

Digital transformation is breaking down national boundaries and accelerating competition and cooperation among cities where key services and infrastructure are concentrated. At the same time, population decline is prompting countries and cities worldwide to devise strategies to attract domestic and international entrepreneurs. However, the twin forces of digitalization and globalization are restructuring national spatial dynamics in favor of large metropolitan areas, concentrating resources and opportunities there while

marginalizing smaller cities—thus exacerbating spatial polarization.

Korea is no exception. The population share of the Seoul metropolitan area continues to rise, with a sustained inflow of young people over the past decade. Only a few non-capital regions are experiencing population growth, and as of 2020, more than 60% of cities and counties in Korea are classified as “super-aged.”<sup>1)</sup> As a result, disparities in economic growth rates and per capita Gross Regional Domestic Product (GRDP) across provinces and municipalities have widened.

Of greater concern is that qualitative disparities related to quality of life are becoming more polarized than aggregate economic indicators. Population decline and aging are more pronounced in non-metropolitan areas, and the resulting increase in vacant spaces and declining populations heightens the risk of expanding “policy blind spots” where residents are excluded from access to basic public services. Consequently, inequalities in qualitative dimensions such as education, healthcare, cultural activities, and transportation services are intensifying.

Against this backdrop, there has been growing discourse on regional startup ecosystems, which integrate the concepts of startup ecosystems with geography. This is because the presence, growth, and innovation capacity of startups and small businesses operating within a region are key drivers of vitality in regional startup ecosystems. Furthermore, regional startup ecosystems are increasingly seen as a potential economic, social, and policy alternative to address persistent challenges such as population decline, economic stagnation, and quality-of-life disparities—offering regions a path to new sources of growth.

Within the startup ecosystem discourse, the concept of “region” remains broad and ambiguous, varying significantly depending on spatial scale and geographic context.<sup>2)</sup> While the definition of region differs across studies, it

<sup>1)</sup> A “super-aged city” refers to a city where over 20% of the population is aged 65 or older.

generally refers to a unit smaller than a nation-state. As shown in [Figure 8-1], the location of startups can be categorized into several regional typologies: Urban Core, Suburban, Small City, Rural Metropolitan, and Rural Nonmetropolitan.<sup>3)</sup>

**Figure 8-1** Types of Regions Where Startups Are Located

	Urbanized areas	Urban Clusters	Rural
Central city	Urban Core	Small City	Rural Metropolitan
Outside Central City	Suburban	Small City	Rural Metropolitan
Nonmetropolitan	Small City	Small City	Rural Nonmetropolitan

Source: RENSKI, H. (2008)

In research on startup ecosystems, the concept of “region” has not yet been established as a standalone field of inquiry. Instead, it has typically been treated as one of many socio-economic environmental variables<sup>4)</sup> or as a peripheral topic within the broader domain of entrepreneurship studies.<sup>5)</sup> The research agenda in the field of “regional entrepreneurship” can be structured as illustrated in [Figure 8-2].<sup>6)</sup> First, one stream of research examines

<sup>2)</sup> In the context of startup ecosystems, the term “region” is expressed in various ways, including local, regional, rural, urban, innovation district, and innovation space.

<sup>3)</sup> Renski, H. (2008). New Firm Entry, Survival, and Growth in the United States: A comparison of Urban, Suburban, and Rural Areas. *Journal of the American Planning Association*, 75(1), 60-77.

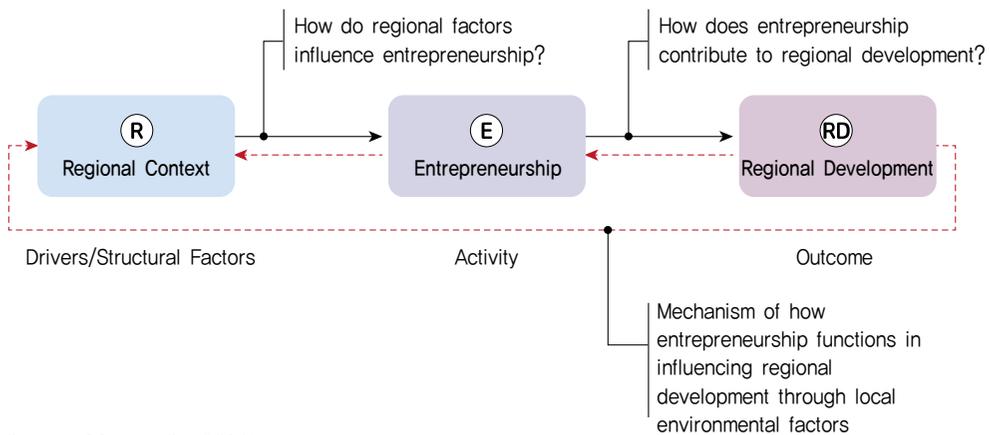
<sup>4)</sup> Carlsson, B. et al. (2013). The evolving domain of entrepreneurship research. *Small Business Economics*, 41, 913-930.

<sup>5)</sup> Meyer, M. et al. (2014). Origin and emergence of entrepreneurship as a research field. *Scientometrics*, 98(1), 473-485.

<sup>6)</sup> Müller, S. (2016). A progress review of entrepreneurship and regional development: What

how spatial characteristics—such as regional structures and contexts—influence startups or entrepreneurial behavior ( $R \rightarrow E$ ). Second, another body of work focuses on the processes by which entrepreneurs and startups that lead regional development are formed ( $E \rightarrow D$ ). Third, some studies investigate how environmental factors within a region influence regional development through the mediating role of entrepreneurship.

**Figure 8-2** A Conceptual Model of Research on “Regional Entrepreneurship”



Source: Müller, S. (2016)

Although the geographic scope of a “region” remains ambiguous and there is no universally accepted theory on the contribution of regional entrepreneurship or startups, it is evident that contextual and environmental factors within a region influence entrepreneurial activity, and in turn, that such activity affects regional development. Regions today face a wide array of pressing challenges—ranging from the widening gap between metropolitan and non-metropolitan areas to the impacts of digital transformation, climate change adaptation, demographic decline, and the employment disruptions associated with the Fourth Industrial Revolution. Recognizing the

are the remaining gaps?. *European Planning Studies*, 24(6), 1133-1158.

limitations of traditional industries in driving regional growth, local actors are increasingly turning their attention to startups as engines of transition toward a new industrial economy.

## 2 How are Regional Startup Ecosystems Be Measured?

A regional startup ecosystem refers to a community formed through “entrepreneurial re-circulation,” where individual, organizational, and institutional components—such as entrepreneurs, startups, established firms, institutions, and cultural factors—are interconnected.<sup>7)</sup> Within such ecosystems, a strong entrepreneurial culture contributes to the creation of innovative startups and high-growth firms.

Regional startup ecosystems are measured across ten key dimensions: (1) formal institutions and regulations, (2) entrepreneurship culture, (3) networks, (4) physical infrastructure, (5) finance, (6) leadership, (7) talent, (8) new knowledge, (9) demand, and (10) intermediate support services.<sup>8)</sup> These ten elements are broadly categorized into institutional arrangements and resource endowments. Together, they constitute the foundational components of the ecosystem and enable productive entrepreneurial activities as outcomes.

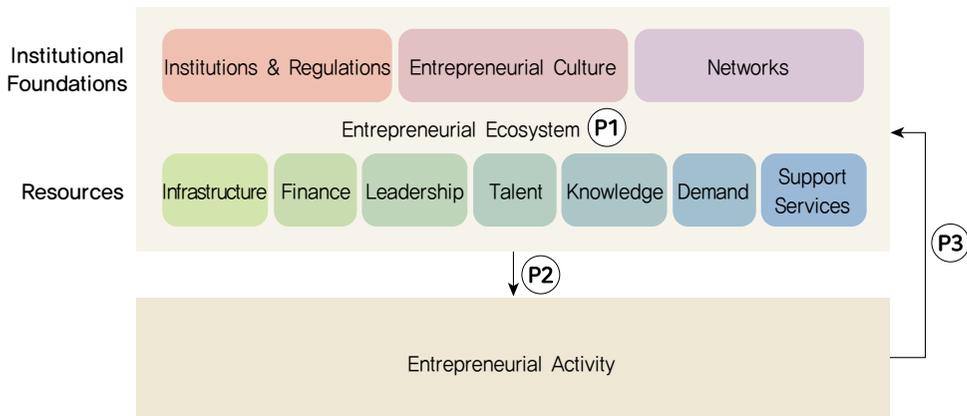
Moreover, institutional and resource-based factors within the ecosystem are in a co-evolutionary relationship—they influence and expand one another (P1), ultimately resulting in entrepreneurial activities (P2). Among these activ-

<sup>7)</sup> Guh, Yang-mi (2022). The Concept and Implications of Entrepreneurial Ecosystems. *Journal of the Korean Association of Economic Geographers*, 25(1), 1–22. Korean Association of Economic Geographers.

<sup>8)</sup> Stam, E. & Van de Ven, A. (2021). Entrepreneurial ecosystem elements. *Small Business Economics*, 56(2), 809–832.

ities, successful ventures generate positive feedback loops within the ecosystem (P3), thus creating a self-reinforcing, cyclical structure (see Figure 8–3).

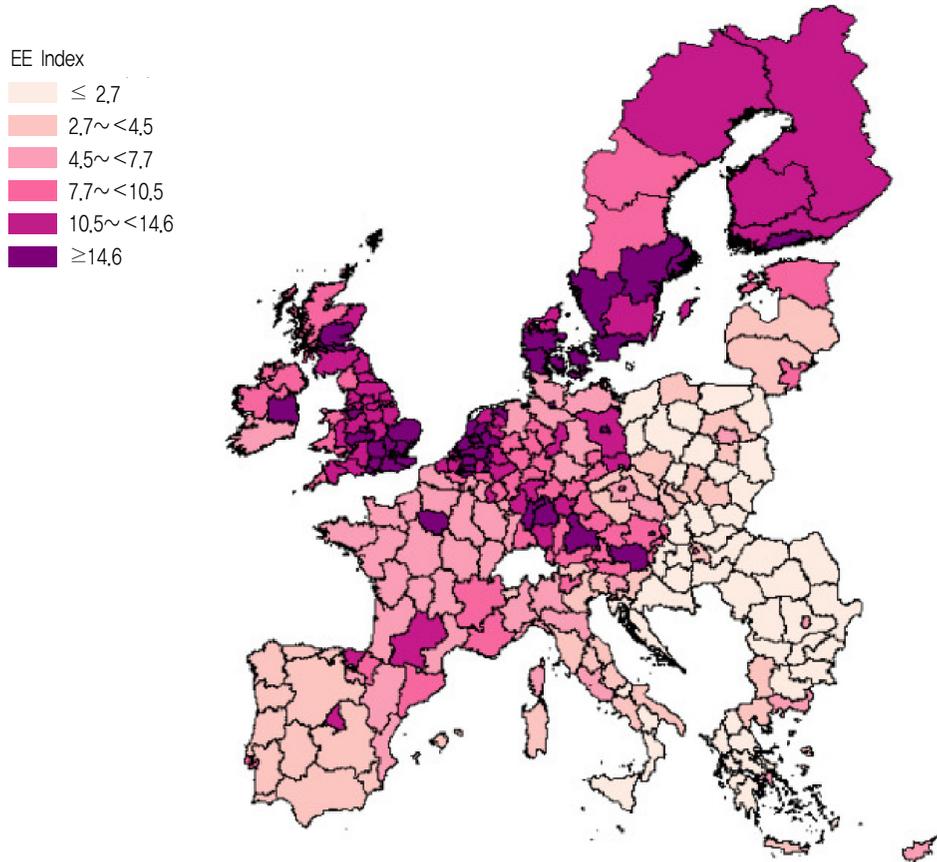
**Figure 8-3** Composition and Interactions of a Regional Startup Ecosystem



Source: Stam, E. & Van de Ven, A. (2021)

Figure 8-4 presents a case study in which the entrepreneurial ecosystems of various European cities are measured using the ten indicators described earlier.<sup>9)</sup> Cities such as London (UK), Paris (France), Helsinki (Finland), Stockholm (Sweden), Copenhagen (Denmark), and Amsterdam (Netherlands) exhibit high Entrepreneurial Ecosystem (EE) Index scores.

<sup>9)</sup> Leendertse, J., Schrijvers, M. & Stam, E. (2022). Measure twice, cut once: Entrepreneurial ecosystem metrics. *Research Policy*, 51(9), 104336.

**Figure 8-4** Measurement of Entrepreneurial Ecosystems by European City

Source: Leendertse, J., Schrijvers, M. & Stam, E. (2022)

### 3 Which Cities Are Best for Startups?

StartupBlink and Startup Genome are private consulting firms that analyze startup ecosystems at the city level to determine which cities are best positioned for entrepreneurial activity.

StartupBlink, since 2017, has evaluated startup ecosystems in 1,000 cities

**표 8-1 | StartupBlink (2023) Global Startup Ecosystem Rankings**

Category	Indicator	Rank	City	Country	Change from Previous Year
Amount	Number of Startups	1	San Francisco	United States	–
	Number of Co-working Spaces	2	New York	United States	–
	Number of Investors	3	London	United Kingdom	–
	Number of Accelerators	4	Los Angeles	United States	–
	Number of Startups on Meetup	5	Boston	United States	–
Quality	Infrastructure for Transport, Domains	6	Beijing	China	–
	Presence of Global Tech R&D Centers	7	Shanghai	China	–
	Presence of Multinational Branches	8	Bangalore	India	–
	Private Investment in Ecosystem	9	Paris	France	▲1
	Startup Employment	10	Tel Aviv	Israel	▼1
	Global Startup Events and Expos	11	Berlin	Germany	▲1
	Presence of Unicorns, Exitcons, Pantheon Companies	12	Seattle	United States	▼1
	Presence of Global Talent	13	New Delhi	India	–
	Global Startup Events	14	Tokyo	Japan	▲1
	Startups Supported by Accelerators	15	Chicago	United States	▼1
Corporate Environment	Diversity Index	16	Shenzhen	China	▼2
	Internet Speed and Cost	17	São Paulo	Brazil	▼1
	Corruption Perception Index	18	Washington, D.C.	United States	▲1
	Freedom of Internet Use	19	Stockholm	Sweden	▲4
	Passport Strength (Visa-Free Access)	20	Singapore City	Singapore	▼
	Existence of Startup Visas				
	Corporate Tax Rate				
	Investment in R&D				
Access to Tech Services (e.g., Payments, Crypto)					
Labor Laws Favorable to Startups					
English Proficiency					
Presence of Top Universities					

→  
Top 20  
Rankings  
in 2023

(a) Startup Ecosystem Indicators

(b) Top 20 cities in 2023

Source: StartupBlink (2023)

across 100 countries using 22 indicators grouped into three dimensions: quantity, quality, and business environment, as shown in Table 8-1. A key strength of StartupBlink is that it ranks cities comprehensively while also

identifying their sectoral specializations.

In 2023, the top 10 cities ranked by StartupBlinkwere San Francisco, New York, London, Los Angeles, Boston, Beijing, Shanghai, Bangalore, Paris, and Tel Aviv. Seoul did not rank within the top 20.

**Table 8-2 | Global startup ecosystem rankings from Startup Genome (2023)**

Domain (Weight)	Indicator (Weight)	Indicator Description
Performance (30%)	Ecosystem Value (50%)	Valuation of startups in the ecosystem
	Exit (37.5%)	Number of startup exits, Exit Growth Index
	Startup Success (12.5%)	Share of startups reaching growth stage; IPO & M&A speed
Funding (25%)	Access (90%)	Early-stage funding amounts and growth rates
	Quality & Activity (10%)	Number of investors, experience level, share of new investors, etc.
Market (15%)	Global Reach (60%)	Ratio of \$1B+ companies, ratio of 5M\$+ exits per capita, % of \$5M+ exits in last 3 years
	Local Reach (30%)	GDP size
	Quality (10%)	Commercialization of scalable intellectual property
Connectivity (5%)	Local Connectedness (90%)	Number of groups in local Meetup programs
	Infrastructure (10%)	Number of bio accelerators and research hospitals
Experience and Talent (20%)	Talent (37.5%)	Share of \$5M+ exits in past 10 years, top GitHub developers, average SW engineer salary, Series A funding averages, life sciences PhD ratio, R&D spending, university rankings, etc.
	Experience (62.5%)	Number of Series A deals in past 10 years, number of \$5M+ exits, number of unicorns from Series A
Knowledge (5%)	Patents (80%)	Number of biotech patents, patent growth rate, patent complexity, tech transfer ratios
	Research (20%)	H-index (research impact metric)

(a) Startup ecosystem metrics

Rank	City	Year-over-year ranking	Rank	City	Year-over-year ranking
1	Silicon Valley		11	Washington, DC	
2	New York		12	Seoul	
	London		13	Berlin	△3
4	Los Angeles	△2	14	Amsterdam	
5	Tel Aviv	△2	15	Tokyo	
6	Boston		16	San Diego	
7	Beijing		17	Toronto	
8	Singapore	△10	18	Paris	
9	Shanghai		19	Chicago	
10	Seattle		20	Sydney	

(b) Top 20 cities in 2023

Note 1: Weight refers to the percentage of weight the metric has in the parent metric.

Note 2: Emerging Ecosystem excludes Connectivity and Knowledge and has simplified metrics.

Source: Startup Genome (2023), 33.

Startup Genome also annually evaluates the startup ecosystems of 300 cities using six key dimensions, or four dimensions in the case of emerging ecosystems, as shown in Table 8-2. Startup Genome utilizes a wide range of data sources, including partnerships with platforms such as Crunchbase and PitchBook, expert interviews, and surveys of more than 10,000 startup CEOs.

Seoul ranked 10th in 2022 and 12th in 2023 in the global startup ecosystem rankings published by Startup Genome.

## 4 Is Korea's Regional Startup Ecosystem Growing?

Since the 1990s, when global capital became increasingly mobile, many countries began strengthening regional or urban competitiveness. In Korea, this shift began under the Lee Myung-bak administration (2008–2013), which set “creating competitive regions with guaranteed jobs and quality of life” as the main goal of regional policy, in response to the country’s vulnerability in global regional competitiveness. Innovation-driven startups were defined primarily as technology and venture-based businesses, and regarded as effective policy tools for job creation and economic growth. Consequently, regional initiatives emphasized tech-based and creative startups, expanding the base of innovation-driven entrepreneurship to local areas. However, the strategy remained largely supply-driven, focused on government-led funding and quantitative inputs, and failed to build a systematic framework for fostering local tech startups.

Under the Park Geun-hye administration (2013–2017), the government adopted the policy vision “National Happiness, Regional Hope: HOPE Project,” promoting regional vitality through localized living zones and job creation. From a startup policy perspective, the administration positioned “job-centered creative economy” as a primary national agenda and promoted the activation of venture and startup ecosystems through entrepreneur-friendly support measures. Efforts were made to continuously improve regulatory obstacles to starting a business, and the government sought to shift toward a private-sector-led venture ecosystem through the launch of the TIPS (Tech Incubator Program for Startup Korea) initiative. Additionally, Creative Economy Innovation Centers were established across regions to promote collaboration with large corporations, taking an ecosystem-based approach to regional startup support.

The Moon Jae-in administration (2017–2022) presented “balanced regional

development” as a core national agenda, promoting policies aimed at achieving a virtuous cycle of local talent and job creation, as well as urban regeneration through the New Deal program. As part of regional industrial innovation, the government emphasized building a regional business ecosystem that reduces dependency on multinational corporations. It proposed nurturing 50 leading mid-sized firms and 1,000 small but strong “star” companies, and establishing over 350 makerspaces to support startups and venture businesses.<sup>10)</sup>

In addition, the administration adopted “startup- and innovation-led

**Table 8-3** Regional Development Goals and Startup Policies of Past Governments

Category	Lee Myung-bak government (Feb 2008–Feb 2013)	Park Geun-hye Government (Feb 2013–Mar 2017)	Moon Jae-in government (May 2017–May 2022)
Environment	Global Financial Crisis	Resident Satisfaction	Low Growth and Declining Birthrate
Goals	Enhance Global Competitiveness of Regions	Improve Quality of Life (Happiness Index)	Establish Region-Led, Self-Sustaining Growth Foundation
Primary Target	Metropolitan Economic Zones	Local Living Zones, Economic Cooperation Zones	Urban Regeneration New Deal, Innovation Cities
Approach / Flagship Programs	Economies of Scale, Regional Flagship Projects	Living Zones for Well-being, Regional Cooperation Projects	Balanced National Development, Three Major Regional Industry Reforms
Startup Policy Direction	Strengthen Innovation Capabilities of SMEs and Ventures to Drive Job Creation and Economic Growth (e.g., simplified incorporation, reform of joint surety system)	National Venture Creation under Creative Economy Policy (e.g., establishment of Centers for Creative Economy & Innovation, launch of TIPS program)	Promote “Startup Nation” for Innovation-Led Growth (e.g., enactment of the Venture Investment Act, comprehensive revision of the Startup Support Act)

<sup>10)</sup> Presidential Committee for Balanced National Development (2018). Vision and Strategy for Balanced National Development under the Moon Jae-in Administration. Presidential Committee for Balanced National Development.

growth driven by SMEs and ventures” as its national governance strategy. To reinforce innovation-driven entrepreneurship, the Small and Medium Business Administration (SMBA) was upgraded to the Ministry of SMEs and Startups (MSS), and the Presidential Committee on the Fourth Industrial Revolution was established to lead cross-sector governance reforms. The “Second Venture Boom Promotion Strategy,” announced in March 2019, sought to support the qualitative growth of startups by scaling up technology-driven businesses. The strategy focused on cultivating startups in emerging industries and high-tech sectors by building an ecosystem that links startup formation, investment, growth, exit, and reinvestment, while also enhancing startup-friendly infrastructure nationwide.

The Yoon Suk Yeol administration (2022–present) has presented the vision of a “local era where people can live well anywhere in Korea,” setting “balanced development led by local governments and responsible decentralization” as its overarching goal. To achieve this, the government outlined five strategic directions: (1) bold decentralization to enhance local autonomy, (2) transformative education reform to cultivate talent, (3) creative innovation-led growth to expand employment, (4) region-specific development to promote local distinctiveness, and (5) customized social welfare to improve quality of life.<sup>11)</sup>

In terms of startup policy, the administration proposed establishing “startup clusters” in core urban areas to promote youth entrepreneurship. This involves the concentrated development of startup-related infrastructure, the relocation of relevant institutions, and differentiated startup support through platforms such as the Creative Economy Innovation Centers.

Following this direction, the creation of startup clusters has accelerated,

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<sup>11)</sup> Presidential Committee for the Era of Regional Autonomy (2023). Vision and Strategy for the Era of Regional Autonomy under the Yoon Suk-yeol Administration. Presidential Committee for the Era of Regional Autonomy.

with increasing emphasis on synergy through spatial concentration of entrepreneurship infrastructure. Representative initiatives include the establishment of complex startup spaces that integrate culture, communication, and housing to attract young people to non-metropolitan regions—examples include Startup Parks, Green Startup Towns, and Campus Innovation Parks. Beyond startup-focused infrastructure, a variety of regional innovation clusters—such as R&D Special Zones, the International Science and Business Belt, industrial complexes, local regulatory free zones, advanced medical complexes, and national innovation convergence complexes—are being simultaneously implemented. Local governments are actively working to attract such clusters to create business-friendly environments and are increasingly allocating a larger portion of local project resources to supporting startups.

Has Korea’s regional startup ecosystem grown over the past 20 years as a result of government-led support initiatives? Despite extensive efforts, relatively few studies have assessed the growth of the domestic startup ecosystem at the regional level. As shown in [Table 8-4], while a handful of studies have provided one-time diagnostic assessments of regional startup ecosystems, most acknowledge the absence of consistent indicators, which makes systematic analysis at the regional scale difficult.

One study that sought to overcome this limitation is the updated version of the “Comprehensive Index of Startup and Venture Ecosystems.”<sup>12)</sup> This

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**12)** The Corporate Index consists of 10 indicators: number of startups (number of technology-based startups), number of venture companies, employment in startups, employment in venture companies, revenue of venture companies, startup rate, five-year survival rate, R&D expenditure ratio among venture companies, and others.

The Investment Index consists of 9 indicators: number of investment institutions, number of venture investment companies, number of venture investment deals, venture fund investment amounts, venture fund formation amounts, venture fund investable capital, amount of recovered investment, number of companies recovered through M&A, and number of companies recovered through IPO.

index was applied to evaluate the growth of regional startup and venture ecosystems in 2020 compared to 2017, with the results summarized in [Table 8-4].<sup>13)</sup>

All 17 provinces and metropolitan areas in Korea demonstrated growth in their startup ecosystems between 2017 and 2020. In particular,

**Table 8-4 | Prior Studies on Korea's Regional Startup Ecosystems**

Source	Ecosystem Components	Unit of analysis
Lee Jeong-woo et al. (2016)	Entrepreneurial mindset capacity index based on the 3P model: Perception, Potential, and Performance	17 provinces and metropolitan cities
Kim Sun-Woo et al. (2018)	<ul style="list-style-type: none"> <li>• Individual: Entrepreneurial characteristics, capability, attitude, and perception of entrepreneurial firms</li> <li>• Environment: Startup strategy, characteristics of entrepreneurship, cultural/structural factors, operational systems, entrepreneurial support, and business environment</li> </ul>	<ul style="list-style-type: none"> <li>• 17 provinces and metropolitan cities</li> <li>• Capital vs. non-capital regions</li> <li>• Urban vs. non-urban areas</li> </ul>
Yoo Ji-yoon et al. (2019)	Policy, financial environment, culture, market, talent, support, knowledge	<ul style="list-style-type: none"> <li>• 1 large city</li> <li>• 1 mid-sized city</li> <li>• 1 small city</li> </ul>
Kim Sun-Woo et al. (2021)	Entrepreneurship index, investment index, government index	17 provinces and metropolitan cities
Kim Hyun-chang & Lee Da-hee (2022)	Entrepreneurship, investment, support infrastructure, technology/knowledge, market access	Gyeonggi Province
Jung Ho-jin (2022)	Market, talent, finance, culture, support, policy	Changwon City

Source: Kim Sun-Woo, Kim Young-hwan et al. (2023)

The Government Index consists of 6 indicators: government budget for startup support, proportion of R&D funding for startups and venture companies, amount contributed to the Korea Fund of Funds, investment amount by the Korea Fund of Funds, venture fund formation amounts, and technology guarantee amounts for startups and venture companies.

<sup>13)</sup> Jung Hyo-jung, Kim Sun-Woo, Jin Woo-seok (2022). The Concept and Evolution of Entrepreneurial Ecosystems: Focusing on Regional Entrepreneurial Ecosystems. Presented at the Summer Conference of the Korea Association for Science and Technology Management and Economics.

Jeollanam-do (Jeonnam) recorded a 3.2-fold increase, followed by Gyeongsangbuk-do (Gyeongbuk) at 2.8 times, Daejeon at 2.1 times, and Jeju at 2 times, indicating relatively significant growth. The drivers of growth varied across regions. Some regions—such as Seoul, Daejeon, Daegu, Incheon, Gangwon, Jeonnam, and Gyeongbuk—exhibited growth primarily due to increased investment activity. In contrast, other regions—such as Gwangju, Ulsan, and Jeju—grew mainly due to expanded government support.

Across the board, changes in the “enterprise index” were relatively modest. Notably, six regions saw a decline in their enterprise index relative to 2017: Ulsan, Chungcheongnam-do (Chungnam), Daegu, Jeollabuk-do (Jeonbuk), Gyeongbuk, and Gyeongsangnam-do (Gyeongnam).

While balanced growth across the core components of the startup and venture ecosystem—enterprises, investment, and government support—is considered ideal, an alternative model in which a single innovation actor leads and others follow in a synergistic manner can also be viable. As such, it is neither appropriate nor meaningful to classify investment-led or govern-

**Table 8-5 | Startup and Venture Ecosystem Index by Region**

Region	Business Index	Investment Index	Government Index	Composite Index	Region	Business Index	Investment Index	Government Index	Composite Index
Seoul	111.1	199.8	136.8	151.7	Gangwon	125.9	319.9	98.6	198.1
Busan	102.3	184.8	181.7	151.2	Chungbuk	103.7	159.9	141.1	133.7
Daejeon	108.5	355.4	143.1	214.2	Chungnam	95.6	218.5	136.5	153.0
Daegu	96.1	211.5	110.1	145.0	Jeonbuk	97.3	159.4	140.2	130.7
Incheon	103.8	273.8	147.5	180.5	Jeonnam	125.1	546.2	257.6	320.1
Gwangju	102.3	130.4	149.2	122.9	Gyeongbuk	98.7	509.8	180.3	279.5
Ulsan	94.4	174.2	180.1	143.5	Gyeongnam	98.8	194.5	184.5	154.2
Gyeonggi	100.8	176.4	132.0	137.3	Jeju	115.2	234.8	314.3	202.9

Source: Jung Ho-jin, Kim Sun-Woo, Jin Woo-seok (2022)

ment-led growth as inherently good or bad. Given the diversity of local resources, institutional environments, and ecosystem conditions, each region must develop its own approach to overcome bottlenecks and enhance the dynamism of its startup ecosystem through productive entrepreneurial activity.

With that in mind, let us now examine two regions—Daejeon and Pohang—that have demonstrated relatively active, technology-driven startup ecosystems.

### **Daejeon: From Deep-Tech Startup City to Economic Powerhouse**

Daejeon has long been recognized as a national leader in science and technology, earning titles such as “Science Capital” and “Special City for the Fourth Industrial Revolution.” The city marked two major milestones in 2023: the 50th anniversary of the Daejeon Daedeok Research and Development (R&D) Special Zone, first established in 1973, and the 30th anniversary of the 1993 Daejeon Expo, which integrated science, technology, and the arts.

Anchored by the Daedeok R&D Special Zone, which concentrates national government-funded research institutes and spin-off research enterprises, Daejeon has developed a robust support infrastructure for deep-tech-based innovation and entrepreneurship. According to Kim Sunwoo et al. (2023), the city ranks just behind the Seoul metropolitan area in terms of innovation-driven startup activity. A key enabler is the Korea Advanced Institute of Science and Technology (KAIST), widely regarded as a venture cradle and consistently achieving the highest national revenues in university-level technology transfer.

These dynamics are also reflected in investment performance. Between 2017 and 2020, Daejeon achieved a compound annual growth rate (CAGR) of 221.1% in exit value, including mergers and acquisitions within the region—demonstrating a healthy virtuous cycle in the local startup ecosystem. While

this reflects the competitiveness of innovation-driven startups in Daejeon, the role of the local government as an investor has also been critical. The city has formed over KRW 1 trillion in startup support funds, with the Daejeon municipal government contributing approximately KRW 85 billion. This ranks Daejeon second only to the Seoul metropolitan area in terms of both fund formation volume and venture investment performance.

The city also hosts 26 certified startup accelerators, six of which are approved TIPS (Tech Incubator Program for Startup Korea) operators—providing Daejeon-based startups with a favorable position to secure matched government funding.

To further institutionalize these efforts, the city plans to establish a regional investment agency, tentatively named “Daejeon Investment & Finance Co.,” by 2024, and a venture-specialized commercial bank by 2026, aimed at serving as a financial hub for local businesses. Daejeon has also enacted the *Daejeon Metropolitan City Startup Promotion Ordinance*, which mandates the formulation and implementation of a comprehensive startup support plan every five years. The ordinance governs the operation of startup support councils, programs, and facilities. Overall, Daejeon’s Startup Promotion Division oversees a broad range of initiatives, including the D-Uncorn Project<sup>14)</sup>, aimed at fostering sustainable startup growth in the region.

Meanwhile, Daejeon’s startup communities are thriving under private-sector leadership. A variety of grassroots forums—including the Doryong Venture Forum, Daejeon Startup Forum, The Dream Venture Investment Forum, Daejeon Convergence Forum, Deep Tech Innovation Growth Forum, Angel Investment Meetup, Daejeon Innovation Technology

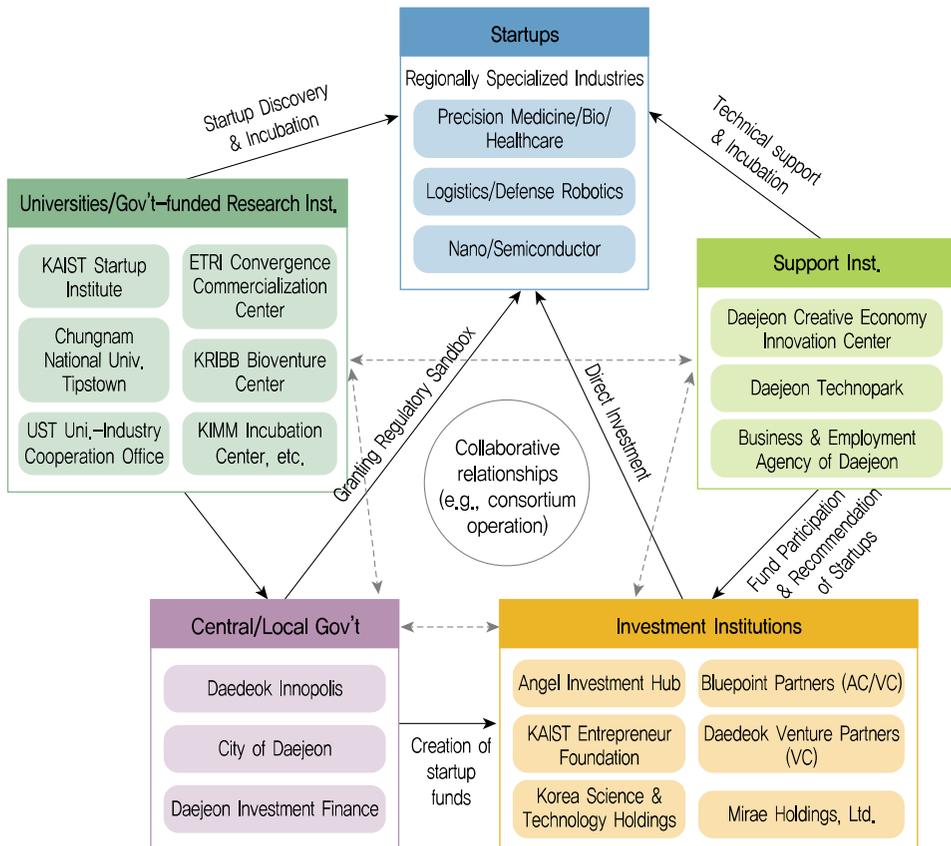
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<sup>14)</sup> Daejeon Metropolitan City, in collaboration with Daejeon Technopark, is promoting the “D-Uncorn Project,” which selects 10 promising startups annually and supports them in growing into unicorn companies. Currently, 20 companies in fields related to regional key industries—such as aerospace, robotics, ICT, and biotechnology—have been selected and are being supported as D-Uncorn companies.

Exchange, Innovative Drug Salon, and Sparkle Club—are actively fostering dense networks between entrepreneurs and investors.

In addition, entrepreneur-led alumni networks have been gaining momentum. Notable examples include the KAIST One Club (KOC), composed primarily of KAIST alumni founders, and the Daejeon Startup Network (formerly the Gungdong Startup Group), which includes alumni from Chungnam National University. These communities are centered around the Eoeun-dong and Gung-dong areas—collectively known as “Eo-Gung-dong”—

**Figure 8-5 Structure and Relationships of the Daejeon Startup Ecosystem**



Source: Kim Sun-Woo, Kim Young-hwan et al. (2023)

and have grown into vibrant ecosystems where founders gather regularly through autonomous, recurring meetups.

Daejeon is often referred to as a deep tech startup city due to the strong research and development orientation of its local startups. These companies typically exhibit a high proportion of R&D investment, characteristic of deep tech ventures. As a result, once they overcome the early-stage “valley of death,” they possess the potential to scale significantly, regardless of the immediate size of their target markets, leveraging their advanced technological capabilities.

Another notable feature is the high regional retention rate of KAIST-based startups. Unlike most startups that launch in Seoul, Gyeonggi, or Incheon, approximately 31.8% of startups originating from KAIST remain based in Daejeon. This indicates a strong local embeddedness of entrepreneurial talent within the city.

Daejeon is also evolving its identity from a startup hub to a broader “economic city” centered on entrepreneurship. This strategic shift is grounded in its relatively high proportion of foreign professionals in science and technology compared to other regional governments. In the absence of major large corporations that typically serve as primary technology demand drivers – as is the case in the Seoul metropolitan area – Daejeon is pursuing a globally oriented startup strategy. Given its robust base of international S&T talent and well-established technology infrastructure, the city is positioning itself to emerge as a globally competitive innovation economy.

### **Innovation-Driven Startup City Led by an Anchor Corporation: Pohang**

POSCO, founded on April 1, 1968 as Pohang Iron and Steel Co., Ltd., is the anchor corporation that established Pohang’s reputation as Korea’s “steel city” and served as the central driver of the city’s regional development. In 1986, POSCO established Pohang University of Science and Technology

(POSTECH), followed by the Research Institute of Industrial Science and Technology (RIST) in 1987, laying the foundation for a university-industry-research collaboration system that integrates fundamental research, talent development, and applied industrial research in Pohang.

This comprehensive ecosystem was made possible by the entrepreneurial vision of the late Chairman Park Tae-joon, who spearheaded POSCO's global competitiveness in the steel industry. His entrepreneurial philosophy can be summarized as “nation-building through steel”, which aimed to increase national wealth and contribute to building a welfare society, and “nation-building through education”, embodied in the establishment of POSTECH—Korea's first research-oriented science and engineering university.

In a media interview during his lifetime, Park Tae-joon reflected on the four guiding principles that shaped his life's work: “Become the best in the world at whatever you do,” “There is no such thing as absolute despair,” “Dedicate your short life to the eternal nation,” and “Design your life ten years ahead.” These principles are closely aligned with the core attributes of entrepreneurial spirit. “Dedicate your short life to the eternal nation” reflects the patriotism of nation-building through steel, grounded in the conservative ideology of rightward loyalty.<sup>15</sup> “There is no such thing as absolute despair” embodies Can-doism, the determined mindset to overcome adversity. “Become the best in the world at whatever you do” captures a perfectionist spirit that pursues excellence down to the final 1%, even in high-pressure situations. Lastly, “Design your life ten years ahead” aligns with the philosophy of nation-building through education, underscoring the

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<sup>15</sup> “Right Face” (우향우) is known as the motto and tradition symbolizing Park Tae-joon. It originates from his saying, “If we fail, we should all walk straight out of the office, turn right, and throw ourselves into the sea at Yeongil Bay.” Turning right at Yeongil Bay leads directly into the East Sea. The Right Face Spirit represents a fierce determination: “We must dedicate ourselves to building the Pohang Iron and Steel Works with a do-or-die mindset—and if we fail, we shall drown ourselves.”

importance of long-term talent development.<sup>16)</sup>

Park's entrepreneurial ethos has evolved into a new legacy of nation-building through innovation ("Changsin Boguk"), supporting the next generation of startups in Pohang. POSCO's venture platform comprises two key components: the Venture Valley and the Venture Fund. The platform draws on its long-standing university - industry - research collaboration model to invest in and nurture startups.

The Venture Valley primarily refers to physical infrastructure and entrepreneurial space. POSCO has established incubating centers branded as "ChangeUp Ground" in Seoul, Pohang, and Gwangyang. The Pohang ChangeUp Ground opened in July 2021 within the POSTECH campus and spans seven floors above ground and one below. It provides office space and comprehensive startup support services, including incubation, market development, investment connections, and networking through various partner collaborations.

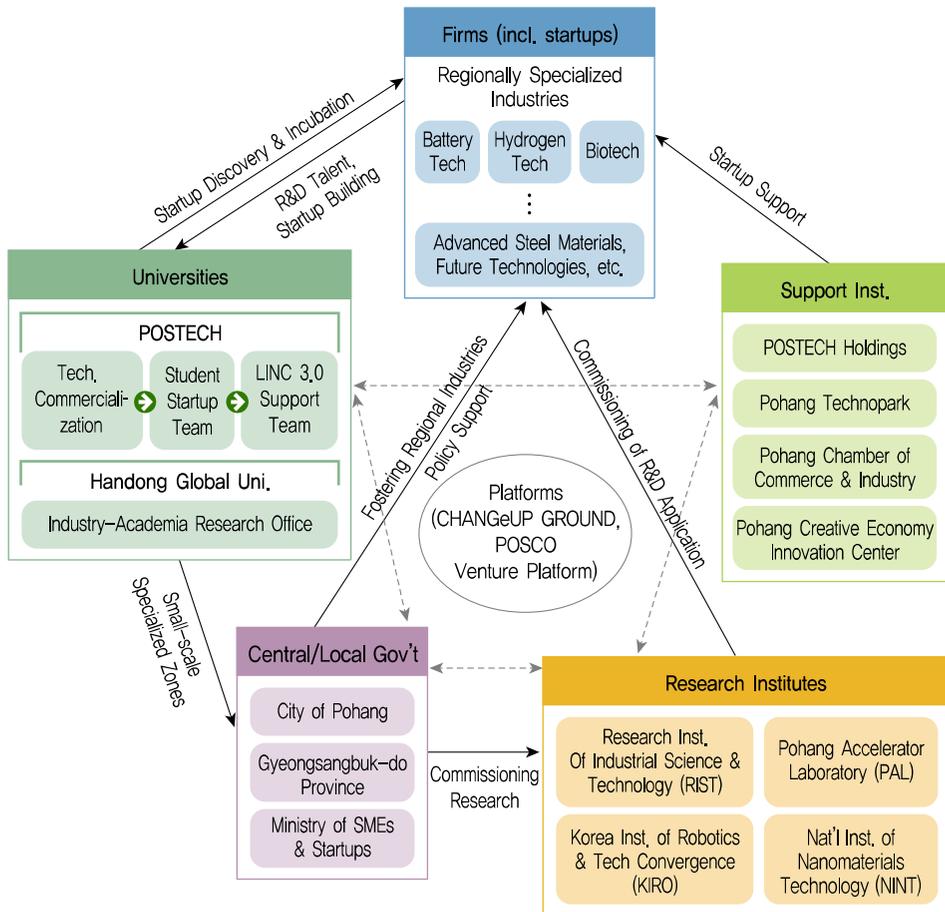
The venture fund totals 1 trillion KRW and is divided into two parts. The Venture Valley program manages 200 billion KRW to support R&D, technology exchange, and funding for domestic startups. The Venture Fund manages 800 billion KRW to invest in high-potential startups both in Korea and abroad.

The City of Pohang has declared its commitment to becoming a "startup-friendly city" as a core policy goal, signaling a strong will to nurture youth entrepreneurship. Reflecting this commitment, the city's top strategic priority for 2023 focuses on the expansion of emerging industries and targeted support for businesses and small merchants—indicating a concerted effort to foster a business-friendly ecosystem centered on new industrial

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<sup>16)</sup> Forbes Korea, Issue No. 201611 (October 23, 2016). In Search of Korean Entrepreneurship (8): Park Tae-joon, Founder of POSCO — The Steel King Who Served His Country through Steelmaking. <https://jmagazine.joins.com/forbes/view/313892>

Figure 8-6 Structure and Relationships of the Pohang Startup Ecosystem



Source: Kim Sun-Woo, Kim Young-hwan et al. (2023)

growth.

In a notable move for a basic local government, Pohang has restructured its Future Strategy Industry Division into specialized departments focused on strategic industries—namely, Bio-Future Industries, Advanced Battery Industries, and Hydrogen Energy Industries. This separation of R&D functions demonstrates a proactive approach to supporting regionally specialized

industries through policy.

The key players in Pohang's innovation and startup ecosystem include POSTECH and the Pohang Accelerator Laboratory, which focus on fundamental scientific research; RIST (Research Institute of Industrial Science and Technology), which leads applied research; ChangeUp Ground, the city's core startup incubation platform; and support institutions for commercialization and global expansion, such as POSCO Digital Transformation, the Pohang Center for Creative Economy & Innovation, and the Pohang Technopark. A distinctive feature of Pohang's startup infrastructure is its tightly integrated university - industry - research (UIR) network, which includes academic institutions for foundational research, R&D organizations for applied innovation, and a large enterprise (POSCO) that serves as the industrial anchor.

These institutions are largely concentrated in the southern district of Pohang, reducing geographic barriers to collaboration and increasing accessibility. This spatial proximity facilitates a seamless and continuous cooperation across various stages of the startup lifecycle.

POSCO plays the role of anchor corporation and is a major engine driving innovation and entrepreneurship in the region. However, Pohang faces challenges in diversifying beyond its strong identity as a steel manufacturing hub. The region's traditional industrial image may limit its ability to attract startups focused on emerging technologies, and the lack of a critical mass of young talent remains a structural obstacle. Furthermore, an outstanding issue for Pohang is attracting additional leading enterprises that can join POSCO in driving regional transformation.

## 5 Strategies for Fostering Regional Startup Ecosystems

Despite extensive policy efforts and significant fiscal investments—including the designation of national industrial complexes, innovation clusters, and R&D special zones—such top-down initiatives have largely failed to generate endogenous innovation within local regions. Instead of empowering regions, these policies often undermined their ability to define local problems autonomously and devise context-specific solutions, ultimately weakening their dynamic problem-solving capacity.

Going forward, regional development must shift toward a model in which local actors lead the process of experimentation and opportunity discovery. This requires regions to identify and cultivate entrepreneurial possibilities through self-initiated trials and innovation efforts. At the same time, regional revitalization must be anchored in an integrated approach that aligns local social systems, industrial capabilities, and technological infrastructure. This holistic strategy will be essential for building sustainable regional models tailored to the unique characteristics and needs of each locality.

Regional startup ecosystems must be premised on sustainable growth. Their strategic vision should center on solving local problems and advancing “place-based innovation” that enables regions to explore new development trajectories through experimentation. Such innovation is driven by convergence and connectivity—across traditional and emerging industries, between R&D and manufacturing, from idea conception to implementation, between research institutions and local residents, and across central and local governments.

A prerequisite for this innovation process is the emergence of entrepreneurs not only in the private sector but also within the public sector. While it is important to foster innovators who launch startups, it is equally

critical for public officials in local governments to act with the boldness of a CEO or the strategic foresight of an investor—designing programs that deliver tangible, long-term returns. Beyond the role of individual bureaucrats, local governments must facilitate access to newly emerging markets, promote interdisciplinary knowledge exchange, and institutionalize innovation practices that can help transition the regional economy.

Furthermore, it is essential to cultivate a local culture in which entrepreneurship is regarded as a socially valuable and personally meaningful endeavor. This includes lowering the psychological, economic, administrative, and time-related burdens of starting a business, and building a regulatory environment that eases barriers to market entry through place-based innovation policy.

A local government that has recently garnered attention for operating with the agility and boldness of a private company—making strategic investments and generating returns for the region—is Hefei, China. Gyeongsangbuk-do Governor Lee Cheol-woo introduced Hefei’s case in a *Brunch Story* post,<sup>17)</sup> and it was also featured in an article by *The Economist*.<sup>18)</sup> The following is a summary of that article’s key points.

#### 📍 Case Study: Hefei, China

Hefei, the capital of Anhui Province in China, has recently emerged as a prominent example of regional innovation-led growth. It has successfully attracted global top-tier electric vehicle manufacturer NIO, display giant BOE Technology, semiconductor leader CXMT (ChangXin Memory Technologies), and the world’s leading natural language processing company iFLYTEK. These high-profile companies have established operations in Hefei, transforming the city into a hub for advanced technology industries.

<sup>17)</sup> Brunch Story. Gyeongsangbuk-do Governor Lee Cheol-woo’s Benchmarking of the Regional Era: Are Local Governments Becoming Corporations? June 26, 2022. <https://brunch.co.kr/@qtingnan/98>

<sup>18)</sup> Economist. Hefei Model of high-tech industrial cluster. 2023.8.5.

The strategic approach behind this transformation is now referred to as the “Hefei Model.” This model encompasses a comprehensive and proactive investment framework, combining:

1. Leading equity investment by local government,
2. Broad-based socialized investment,
3. Angel investment,
4. Creation of dedicated investment funds, and
5. Professional fund management.

Together, these elements create a synergistic system for technology-driven urban development.

Let us examine a specific case. In 2020, Hefei City invested in NIO, one of the global top three electric vehicle manufacturers, at a time when the company was facing severe liquidity challenges. Hefei’s investment amounted to 7 billion RMB (approximately 1.226 trillion KRW). Since NIO was a U.S.-listed company at the time, it was initially ineligible to receive direct capital injections from a Chinese provincial government. To overcome this barrier, a joint venture entity named “NIO China” was established. Hefei’s investment was made in NIO China under stringent contractual conditions.

Key conditions included the requirement that, within one year, all of NIO’s China-based assets and operations be transferred from the U.S.-based parent company to NIO China. Additionally, NIO’s Chinese headquarters, R&D center, and second production base were to be located in Hefei. The contract further stipulated that NIO China must deliver cumulative operating income of at least 420 billion RMB between 2020 and 2025 and contribute no less than 7.8 billion RMB in tax revenue. Another condition mandated that an IPO be completed in China within 60 months, subject to shareholder approval.

This case illustrates how Hefei City functioned more like a professional investment firm than a public entity—clearly defining the exit mechanism and timing for capital recovery. By investing 7 billion RMB, Hefei effectively positioned itself to generate a return of 100 billion RMB, embodying the role of a highly strategic and savvy investor.

*The Economist* highlighted the following as core success factors behind Hefei’s model:

- ① Hefei was able to secure top-tier technology talent, primarily due to the presence of the University of Science and Technology of China, which had relocated from

Beijing during the Cultural Revolution.

- ② The city government facilitated personnel exchange and mobility between academia, local industry, and government, fostering trust and informal networks. This foundation enabled the establishment of a “chain boss system” in strategic industries—a governance framework for orchestrating supply chains and systematically identifying promising startups.
- ③ Unlike traditional local governments, Hefei created capital pools similar to private equity ventures that took a long-term view. These funds, tolerant of failure in pursuit of innovation, collaborated with industrial partners to make bold, early-stage investments.
- ④ Most distinctively, Hefei operated with the boldness and initiative typical of private institutions—eschewing overreliance on central government approval and instead forging ahead with entrepreneurial governance.

Hefei’s success offers significant lessons for regional governments in Korea. It demonstrates how local governments can play catalytic roles in innovation ecosystems—not only as regulators or facilitators, but as active investors and strategic partners.

The following are key tasks for revitalizing regional startup ecosystems:

First, regions must identify strategic focus areas based on their unique strengths—such as geographic advantages, existing industrial ecosystems, and the specialized technologies or talent pools found in local universities and research institutions. Local governments should engage in close communication and cooperation with universities, research institutions, industrial stakeholders, and the central government during this strategy-setting process.

Second, it is critical to attract anchor firms—both large domestic corporations and multinational companies—that can serve as hubs within these strategic sectors. Local governments should offer substantial incentives to secure such firms, including the development of industrial parks, transportation and communication infrastructure, physical facilities, tax benefits,

subsidies, and equity investment. These firms must possess both the capacity and commitment to lead in the strategic domains.

Third, local governments should facilitate the creation and operation of permanent community networks in which corporations, universities, research institutions, and startups regularly communicate, collaborate, and exchange knowledge. While these communities should ideally be run by the private sector, government support is essential for ensuring their continuity. The local government must serve as a network hub, actively promoting interaction and collaboration among ecosystem actors while maintaining a coherent long-term vision.

Fourth, local governments should help secure funding sources that can tolerate risk and invest with a long-term perspective. They should either establish or support the operations of venture capital entities or accelerators capable of such investments. This involves not only competing for central government resources—such as funding under the “12 Strategic Industries Initiative” or the “Regional Startup Ecosystem Development Program”—but also attracting private sector capital to strengthen regional investment capacity.

Fifth, local governments must play a leading role in startup incubation and acceleration by working with universities, research institutions, and both young and mid-career professionals. This may require recruiting or partnering with private sector experts and conducting outreach to local residents to foster community-wide buy-in and alignment.

Sixth, local governments should adopt a more proactive and entrepreneurial approach, initiating high-risk innovations that open up entirely new markets. In this model—aligned with the concept of the “entrepreneurial state”—mayors and governors act as institutional entrepreneurs: establishing funds, training talent, and designing long-term incentive schemes to accelerate innovation and ecosystem growth.

Lastly, the central government must help decentralize Korea's highly capital- and knowledge-concentrated startup ecosystem. This requires transitioning from a Seoul-centric model to a distributed and networked structure. A more balanced policy for metropolitan development should strengthen economic and functional linkages between central cities and surrounding regions, enabling collaborative utilization of shared resources and infrastructure at the megaregional scale.



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## Chapter 9

# Startup Culture in Korea

1. The Evolution of Korea's Startup Ecosystem Culture
2. Language and Symbols
3. Identity, Members, and Heroes
4. Shared Values, Institutions, and Core Assumptions
5. Ecosystem Leadership
6. Future Challenges for Korea's Startup and Venture Ecosystem Culture

## 1 The Evolution of Korea's Startup Ecosystem Culture

### What is Startup Ecosystem Culture?

Startup (or venture) ecosystem culture refers to the norms, beliefs, values (both current and aspirational), and practices shared by members of the startup ecosystem.<sup>1)</sup> Examples include language, customs, structures, systems, institutions, foundational assumptions, and identity—specifically, a sense of belonging to a particular group.<sup>2)</sup>

Startup ecosystem culture functions as a reference framework or a set of implicit rules guiding members' decisions and behaviors. It exerts a formative influence on behavior patterns. Thus, by examining how the startup ecosystem culture has formed and evolved, we can gain insight into the broader trajectory and future direction of the ecosystem.

Korea's startup ecosystem began to emerge in the early 1980s with the founding of small and medium-sized enterprises (SMEs) focused on technological innovation in fields such as computing, telecommunications, and semiconductors. Accordingly, the culture of the startup ecosystem also began to take shape at that time. However, during the 1980s, the cultural aspects of the ecosystem were not yet distinctly defined.

It was in the late 1980s to early 1990s—amid a wave of new venture creation—that entrepreneurs and startup members began, often unconsciously,

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1) In this chapter, the terms “startup ecosystem” and “venture ecosystem” are considered synonymous.

2) To understand “ecosystem culture,” it is necessary to understand the definition of “group culture” in cultural anthropology. In cultural anthropology, a group refers broadly to entities such as ethnic groups, tribes, regions, nations, corporations, sectors, societies, economies, and industries, serving as the units of analysis for discussions of organizational culture. Organizational culture is defined as the collective set of invisible elements—including values, beliefs, ideologies, customs, norms, traditions, knowledge, and skills—shared by a group's members, which governs their thinking, judgment, and behavior.

to form values and norms, giving rise to what would become Korea's startup ecosystem culture (also referred to as venture culture or venture ecosystem culture). A shared ethos emerged among these founders: "We are different from, or should be different from, Korea's traditional corporations, especially the chaebols." This was accompanied by a mindset and behavioral norms oriented toward launching and growing innovation-driven ventures grounded in advanced technology.

A key milestone came in December 1995 with the establishment of the Korea Venture Business Association, which marked a turning point in the clear articulation and consolidation of the venture ecosystem culture. Since the 2000s, this culture has continued to evolve into a coherent cultural unit among ecosystem participants who share specific core values. Today, the cultures of venture businesses and startups are recognized as distinct enough to be perceived as separate economic communities with clearly defined cultural boundaries.

The culture of a startup ecosystem can be understood through the conceptual components of organizational culture.<sup>3)</sup> For a startup ecosystem to function effectively, entrepreneurship must be activated—this involves integrating entrepreneurs (founders), human capital, markets, technology, knowledge, and capital to generate new, innovative value. Entrepreneurship—encompassing risk-taking, a pioneering spirit, a willingness to challenge the status quo, and creativity—serves as the operational principle of the startup ecosystem and can be observed through its cultural attributes.

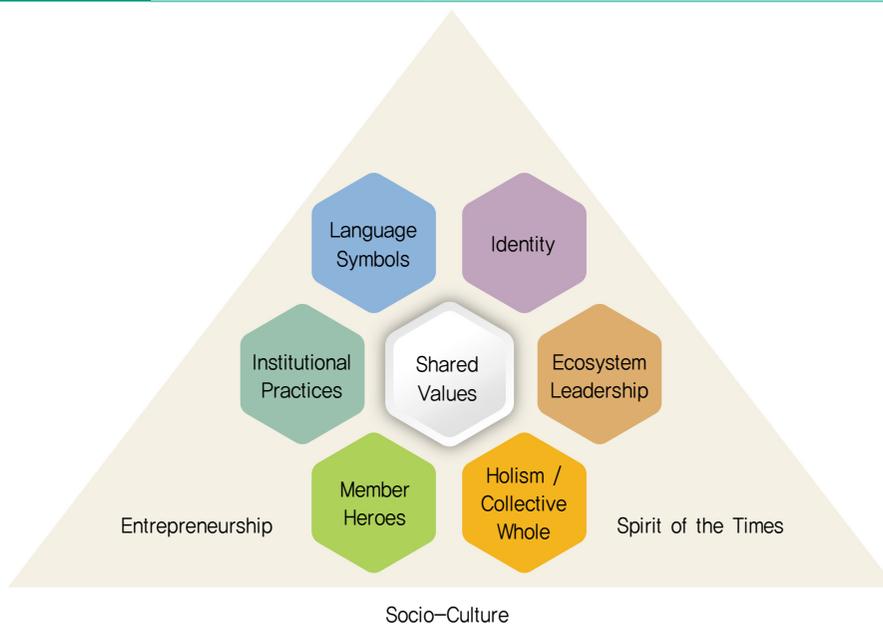
As a subcomponent of a nation's industrial ecosystem and social system, startup ecosystem culture is influenced by broader sociocultural forces, and in turn, can exert influence on the society at large. The prevailing spirit of

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<sup>3)</sup> In this chapter, the focus is placed on elements such as language, symbols, identity, shared values and behavioral patterns, staff, structure, and systems and institutions, based on Schein's (1985) hierarchical model and the 7S Framework.

an era (*Zeitgeist*)—which encompasses society-wide norms, aspirational values, pressing demands, and the collective will to solve shared challenges—tends to be reflected in the cultural dimensions of an ecosystem, alongside its embedded entrepreneurial ethos. A conceptual model of startup ecosystem culture is illustrated in [Figure 9-1].

**Figure 9-1 Startup Ecosystem Culture Explanation Model**



### Startup Ecosystem Culture Evolves

Just as sociocultural systems change in response to historically shared experiences or structural and technological transformations, so too does the culture of the startup ecosystem shift—driven by the emergence of new technologies, changes in ecosystem participants, and evolving sociocultural values. This chapter focuses on identifying which values and behavioral patterns have existed and been pursued within Korea’s startup ecosystem, how

**Table 9-1 Cultural Shifts in Korea's Startup Ecosystem: Past vs. Present**

Cultural Element & Period	Past (1980s to early 2000s)	Current (mid-2000s to present)	Transformation in Startup Culture
Language and Symbols	<ul style="list-style-type: none"> <li>Venture business</li> <li>Venture enterprise</li> <li>Venture firm, venture</li> <li>Startup ecosystem</li> <li>Entrepreneurship</li> </ul>	<ul style="list-style-type: none"> <li>Startup</li> <li>Scale-up / unicorn</li> <li>Startup innovation</li> <li>Startup ecosystem</li> <li>Entrepreneurial spirit</li> </ul>	<ul style="list-style-type: none"> <li>Shift from "venture" to "startup" in public discourse</li> <li>Terms like "venture spirit" emerged from Japan and influenced Korea</li> <li>Iconization of entrepreneurship post-IMF crisis</li> </ul>
Identity	<ul style="list-style-type: none"> <li>Venture person</li> <li>Venture Association</li> <li>Korea Venture Capital Association</li> </ul>	<ul style="list-style-type: none"> <li>Startup founder</li> <li>Korea Startup Forum</li> <li>Startup Alliance</li> </ul>	<ul style="list-style-type: none"> <li>Shift in identity from "venture" to "startup"</li> <li>Rise of startup community identity over legacy venture associations</li> </ul>
Culture and Norms	<ul style="list-style-type: none"> <li>Challenge, innovation</li> <li>Individualism, privatization</li> </ul>	<ul style="list-style-type: none"> <li>Challenge, innovation</li> <li>Community orientation</li> </ul>	<ul style="list-style-type: none"> <li>Emphasis shifting from individual heroes to collective intelligence</li> <li>Demand for transparency, fairness, speed</li> </ul>
Institutional Practices (Systems)	<ul style="list-style-type: none"> <li>Team system</li> <li>Seniority-based system</li> <li>Performance pay</li> <li>Stock options</li> </ul>	<ul style="list-style-type: none"> <li>Team system (lean)</li> <li>Seniority system</li> <li>Performance pay</li> <li>Stock options</li> </ul>	<ul style="list-style-type: none"> <li>Import of American-style management systems like team, seniority, performance, stock options</li> </ul>
Exit Assumptions	<ul style="list-style-type: none"> <li>Never Exit</li> <li>Venture firms reliant on large corporations</li> </ul>	<ul style="list-style-type: none"> <li>Exit by M&amp;A</li> <li>Specialist venture firms with independent R&amp;D</li> </ul>	<ul style="list-style-type: none"> <li>Companies no longer "grow forever"</li> <li>Emergence of Exit-focused strategies via M&amp;A</li> <li>Rise of deep tech startups with R&amp;D competitiveness</li> </ul>
Key Founding Players	<ul style="list-style-type: none"> <li>ICT manufacturers</li> <li>Bio-focused founders</li> <li>Returnee researchers</li> <li>Immigrant founders</li> </ul>	<ul style="list-style-type: none"> <li>Internet services</li> <li>Mobile / e-commerce</li> <li>YouTubers, creators</li> <li>Fintech startups</li> </ul>	<ul style="list-style-type: none"> <li>Shift in ecosystem actors: from engineers to diverse founders</li> <li>Inflow of strategic founders from large firms to startups</li> <li>Rise of youth and immigrant entrepreneurs</li> </ul>
Ecosystem Leadership	<ul style="list-style-type: none"> <li>Led by private venture associations</li> </ul>	<ul style="list-style-type: none"> <li>Led by government</li> <li>Public-private partnerships</li> <li>Government-supported unicorn programs</li> </ul>	<ul style="list-style-type: none"> <li>Shift from private-led to public-private partnership</li> <li>Government agencies as ecosystem leaders, especially for unicorn incubation</li> </ul>

they have changed over time, and how they are likely to continue evolving.

[Table 9-1] summarizes the major changes in cultural elements that have shaped the Korean startup ecosystem from the past to the present.

## 2 Language and Symbols

### From “Moeheom-Gieop (Adventurous Business)” to “Venture Business” and “Startup”: The Evolution of Language

The emergence of terms such as “venture,” “venture business,” and “venture industry” in Korea holds significant historical meaning. The use and adoption of these terms by members of the ecosystem have functioned as a cultural foundation—one that has both defined the sociopsychological boundaries of venture and startup culture and supported the birth, formation, and sustainability of Korea’s venture-startup ecosystem.

Before the term “venture” came into common use, Korean media outlets in the 1980s often translated “venture business” directly as *moheom-gieop*, meaning “adventurous business.” Even Korea’s earliest known publication on the subject—Lee Jin-Joo (1984)<sup>4</sup>—translated the term as “adventurous business.”

In the early 1980s, even major Korean news outlets used the literal translation *moheom-gieop*, or “adventurous business,” in place of “venture business,” underscoring how unfamiliar the terminology was at the time. The Korean language lacked an equivalent term that could adequately reflect the organically evolved notion of venture businesses in the U.S. and Europe. At the time, a venture business in Korea was broadly understood as a startup in a new business domain—such as computers, electronics, tele-

<sup>4</sup>) Adventurous Enterprises, Venture Capital, and Technology Entrepreneurs. Korea Economic Research Center, Korean Chamber of Commerce and Industry.

communications, chemistry, biotechnology, environment, healthcare, or industrial machinery—pursuing high-risk management based on new technologies and funded by venture capital.

In the 1990s, a wave of entrepreneurship emerged from former employees of large corporations, universities, and research institutes. These new businesses, while high-risk, were viewed as *new technology-intensive small enterprises* with high-growth potential if successful.<sup>5)</sup>

Globally, however, the concept of a “venture business” was still fluid. In the U.S. and Europe, “venture business” had no uniformly accepted definition. In the American context, the term was often used interchangeably with “startup,” and generally referred to *technology-based new businesses backed by venture capital*.<sup>6)</sup> In this sense, “venture business” in the U.S. was implicitly defined through its funding model rather than legal or institutional designations.

In Korea, the term “venture business” was introduced via Japan. The English term “venture business,” used in the U.S. and U.K., was rendered into Japanese as the loanword “venture business.” Korea adopted the term while benchmarking Japanese policy documents.<sup>7)</sup> In this context, *venture business* referred to small and medium-sized enterprises founded in new technology-driven sectors such as computers, electronics, telecommunications, chemistry, biotechnology, environment, healthcare, and industrial machinery—led by growth-oriented entrepreneurs who engaged in

5) 20 Years of Korean Venture Business: From the Frontlines 1995–2015. Mael Business Newspaper, February 25, 2016.

6) Choonwoo Lee (2005). A Study on the Characteristics and Essence of Venture Companies. *Journal of Business Research*, 34(2), 315–348.

7) According to the Encyclopedia of Korean National Culture, a venture company is a translation of “Venture Business” in English, also called an “adventurous business.” In Western countries, similar terms include “High Technology Small Business,” “New Technology-Based Firms (NTBF),” “High Technology Business,” and “New Venture Company.” In Japan, it is referred to as “Venture Business” as well.

risk-intensive management.<sup>8)</sup>

In Korea, the enactment of the *Special Measures Act for the Promotion of Venture Businesses* in 1997 formally set forth detailed eligibility criteria, launching full-scale policies to foster the venture industry. However, as the number of companies meeting the legal criteria increased—even though many failed to embody the true spirit of innovation—the term “titular venture” emerged to describe these entities, triggering debates within academia and industry about what truly constitutes a genuine venture company.

During the Roh Moo-hyun administration (2003–2008), the government officially adopted the term “technology-innovative small and medium enterprises (SMEs)”, deliberately distancing itself from the term “venture business.” This semantic shift was politically motivated: during the preceding Kim Dae-jung administration, indiscriminate investments on the KOSDAQ and episodes of investor exuberance had led to the rise of unethical, opportunistic ventures. Consequently, venture businesses were branded as “hotbeds of corruption,” and the Roh government actively suppressed the term “venture” to block its political fallout.

By replacing “venture” with the more technocratic phrase “technology-innovative SME,” the administration sought to reframe entrepreneurial efforts within a more ethically and politically neutral framework. However, this distancing policy inadvertently triggered a stagnation period in Korea’s venture sector. Furthermore, the government’s implicit framing of venture businesses as ethically compromised incubators of misconduct contributed to an intergenerational rupture: young entrepreneurs of the late 2000s, launching internet- and smartphone-based businesses in a post-iPhone era, began to identify themselves as *startups* rather than *venture companies*. This marked a cultural and ideological split from the earlier wave of entrepreneurs who had

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<sup>8)</sup> Choonwoo Lee (2005). A Study on the Characteristics and Essence of Venture Companies. *Journal of Business Research*, 34(2), 315–348.

launched ventures during the early 2000s or earlier.

The term *startup* began gaining traction after 2010, particularly among younger founders and with the backing of large internet service companies. In practice, both “venture company” and “startup” are still used interchangeably today, although each carries distinct generational, cultural, and institutional connotations.

The evolution from *adventurous business*, to *technology-intensive SMEs*, to *venture business*, and eventually to *startup* reflects Korea’s ongoing effort to define and legitimize a unique entrepreneurial identity. Ultimately, the term *venture business* gained sufficient institutional legitimacy to be adopted in 2017 as part of the official name of a government ministry: the *Ministry of SMEs and Startups*. This formal designation marks the startup ecosystem’s recognition as a legitimate and enduring pillar of Korea’s new economic and cultural order.

### The Uniquely Korean Term “Venture Spirit”

The phrase *venture spirit* emerged in Korea in the 1990s alongside the birth of the country’s venture ecosystem. While a domestic newspaper had already introduced the term as early as 1983,<sup>9)</sup> there remains no academic literature

<sup>9)</sup> “Venture Spirit.” JoongAng Ilbo, November 24, 1983.

The English word “venture” means “adventure” or “risk-taking.” However, the nuance differs slightly between the Western and Korean perceptions. Koreans associate “adventure” and “speculation” with risk first and tend to hesitate, showing passive attitudes toward pioneering new fields. In contrast, Americans actively break through obstacles without avoidance, as seen in American football culture. Sometimes appearing reckless, they rarely surrender or give up. This spirit enabled the creation of compound terms like “venture capital” and “venture business.” In fact, historically, the term “venturer” in Western usage referred more to investors or merchants rather than mere adventurers, a usage dating back to the 16th century. During the 1970s oil crises, Americans displayed “venture spirit,” leading to successes such as Apple and Genentech. Genentech succeeded in artificially synthesizing insulin using recombinant DNA technology in 1978 and commercialized it into a pharmaceutical approved by the FDA. Apple revolutionized the global computer market with the development of the personal computer. These companies started modestly but shared

formally analyzing *venture spirit*, largely because it is effectively synonymous with *entrepreneurship*.

Within Korea's venture industry, however, *venture spirit* acquired its own connotation—interpreted in the field as a composite of boldness, risk-taking, and high-tech R&D orientation. In particular, it conveyed the spirit of launching high-risk, high-return businesses rooted in cutting-edge innovation. For venture founders, it embodied the drive to pursue ambitious technological dreams despite uncertainty.

From the 1980s through to the present, *venture spirit* has continued to evoke the aspirational ethos of young Korean entrepreneurs—those who attempt to build ventures based on their intellect and youth. While *entrepreneurship* is the global academic term, *venture spirit* functioned as an accessible cultural shorthand, coined and used by Korean venture builders to express the willingness to challenge convention, embrace risk, and pursue transformation through innovation.

If the entrepreneurial spirit of Korean founders who led postwar reconstruction and industrialization—such as those behind Samsung, Hyundai, POSCO, and Lucky Chemical (now LG Chem)—has been described as the “*hungry spirit*”, then the term “*venture spirit*” emerged to reflect a different generational ethos: one driven by young venture entrepreneurs launching futuristic growth businesses based on advanced technologies. In this context, *venture spirit* conveys a challenge-oriented mindset unique to a new wave of tech-savvy youth.

The leadership style of Korean venture entrepreneurs typically embodies traits associated with innovation, boldness, and risk-taking—core elements

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common traits: exceptional confidence, goal orientation, action-driven mentality, endurance under stress and loneliness, selective curiosity, aggressive ambition, and creativity. Already in the 1960s, there had been a first “venture boom” in the U.S. under the spirit of the “frontier.” By the 1980s, the U.S. had over 700 venture capital firms supporting nearly 590,000 technology-intensive new companies, creating three million new jobs.

of entrepreneurship. The *founder's mentality* in this community is often expressed through mottos and values such as “*never give up,*” “*relentless passion and persistence,*” and simply, “*challenge.*”

One notable cultural shift is the fact that the term “*startup spirit*” is virtually absent in Korea’s startup ecosystem that emerged post-2010. Instead, the term *entrepreneurship* is more commonly used among startup founders. This is because the concepts of *venture* and *startup* are now widely regarded as synonymous in meaning and intent.<sup>10</sup> The key differences lie not in the fundamental entrepreneurial DNA, but in the generational backgrounds of the founders and the specific business domains and technologies they engage with.

### Venture Businesses and Startups as Symbols of Youth Taking on Innovation

“These young companies, fueled by the burning dreams of young engineers, are shaking up the industrial landscape at three times the growth rate of ordinary SMEs. These tech firms signal the arrival of a new era of venture (adventurous) industries in high-tech fields such as electronics and fine chemicals since the 1980s. ... (omitted) ... Unlike the traditional business climate driven by non-technological factors, these knowledge-intensive companies are sprinting forward with youth and intellect as their only capital.”

—Excerpt from a Korean economic newspaper, early 1983.

Words like *youth*, *dreams*, *intellect*, and *disruption* filled the article. In an era when Korea’s per capita income hovered around \$1,500, the rise of ventures felt fresh—and even revolutionary. Long before the *Special Measures Act on the Promotion of Venture Businesses* was enacted in 1997, these pioneers had already opened a new chapter in the Korean economy under the banner

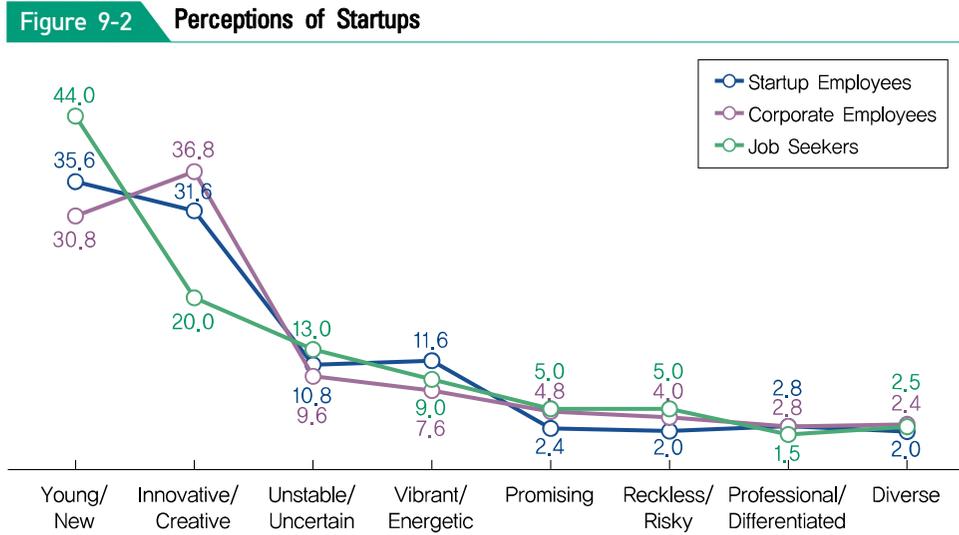
<sup>10</sup> Choonwoo Lee (1999). Also in Lee’s 2004 paper, it is stated that “venture” and “startup” are considered synonymous, sharing entrepreneurship as the common core.

of venture business.

The phrases from the article, such as “opened a new genre of venture business in Korea” and “venture entrepreneurs are young people who demonstrate entrepreneurship rooted in innovation, challenge, and creative destruction,” reflect a cultural shift that had not been seen before. These expressions help reveal the cultural landscape of the venture ecosystem in Korea during the 1980s.

Traits such as youthfulness, a spirit of innovation and challenge, a focus on advanced R&D, preference for horizontal relationships, and openness are still evident among today’s startup founders. These are also cultural characteristics commonly observed across venture startups globally.

The public perception of startups continues to mirror that of first-generation venture firms: young/new, innovative/creative, unstable/uncertain, energetic/vibrant.



Source: Startup Alliance (2023). Startup Trend Report 2022.

### Venture Firms Symbolizing the Recovering from the “IMF Crisis”

In the historical context of Korea, venture firms emerged as a future-oriented solution to overcome the IMF financial crisis.<sup>11)</sup> Amid the economic turmoil, public perception drew a sharp contrast between the old and the new: established conglomerates (*chaebols*) were blamed for the crisis—viewed as the embodiment of all things wrong—while venture firms were seen as paragons of virtue and hope. This social and cultural narrative evolved into a kind of *zeitgeist*. Venture firms were expected to uphold strong ethical standards and practice socially legitimate values, serving as role models for Korean capitalism.

In fact, many venture firms rejected the hallmarks of *chaebol*-style management, particularly its opacity and insularity, and instead emphasized openness and transparency. They often shared in the broader anti-*chaebol* sentiment of the time.

From December 3, 1997, through the early 2000s, during the peak of Korea’s financial crisis, the public and media consistently pointed to large conglomerates as the primary culprits behind the country’s request for IMF bailout support (Chosun Ilbo, 1997.11.27; Maeil Business Newspaper, 1997.12.2; 1998.9.3; Dong-A Ilbo, 1998.3.23; Kyunghyang Shinmun, 1998.12.15). The opaque governance structures of the *chaebols*, their use of circular cross-shareholding, the pursuit of unsustainable growth through excessive debt, owner-centric private control, and rigid hierarchical systems that stifled individual talent were all cited as causes of the crisis.

The IMF crisis marked a turning point in Korea’s sociocultural values. For instance, many companies abandoned the Japanese-style lifelong employ-

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<sup>11)</sup> On December 3, 1997, just before Korea’s 15th presidential election, the Korean government declared a moratorium and applied for IMF financial assistance. Korea received a \$19.5 billion bailout from the IMF, narrowly avoiding national bankruptcy. However, during the IMF program (December 3, 1997–August 23, 2001), conglomerates, SMEs, and venture companies alike suffered severe hardships, and many companies went bankrupt.

ment system, and American-style human resource practices—emphasizing individual performance and capability—quickly took hold in Korean society. Venture firms and startups were at the forefront of this transformation, playing a pioneering role in importing American values, norms, institutions, and business practices.

Whereas Korea’s small and venture firms had traditionally pursued a “substitute-import industrialization strategy,” benchmarking and imitating advanced U.S. or Japanese companies as a pathway to growth, a notable shift began to emerge with Korean ventures. These firms started to exhibit behavior indicative of pursuing globally first-of-its-kind technologies, products, and services.<sup>12)</sup>

In the 1990s, some Korean venture companies even succeeded in listing on the U.S. NASDAQ stock market. For example, Thrunet, a subsidiary established with investment from Trigem Computer, became the first Korean firm to go public on NASDAQ, based on its pioneering work in building ultra-high-speed optical communication networks.<sup>13)</sup>

### 3 Identity, Membership, and Heroes

#### The Identity of Korea’s Startup Ecosystem: “Venture People” and “Startup Founders”

Culture plays a role in fostering a sense of group affiliation among members, thereby forming a distinct group identity that differentiates them from other

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<sup>12)</sup> Medison (developed the world’s first 3D ultrasound diagnostic device) and Telson Electronics (pioneered wide-area pagers and PCS communications).

<sup>13)</sup> Thrunet, another early venture, was merged into Hanaro Telecom on January 1, 2006. Hanaro Telecom was later acquired by SK Telecom in October 2008 and rebranded as SK Broadband.

social or economic groups. From the 1980s through to the present day (2023), founders and employees of venture firms and startups in Korea have developed a socio-psychological sense of boundary—that they are fundamentally different from the companies rooted in Korea’s industrialization and modernization era. The Korean startup ecosystem is now recognized as an independent economic subculture within the broader Korean economy, with its members increasingly conscious of the unique identity that defines the boundaries of their community.

Starting in the 1990s, venture entrepreneurs in Korea began referring to themselves as “venture people”, thereby differentiating themselves from traditional small and medium-sized enterprises as well as chaebol conglomerates. This identity became more clearly defined in December 1995 with the official launch of the Korea Venture Business Association (KOVA). Through the establishment of KOVA, the term “venture” was formalized, and high-tech startup founders who identified themselves as venture entrepreneurs or *venture people* came together under this collective identity. This marked the emergence of a distinct entrepreneurial class, separate from those of previous economic eras in Korean history.

Since the 2010s, a new generation of founders identifying with the term “startup” have begun referring to themselves as “startup founders,” drawing a boundary between themselves and the older generation of *venture people*.

### **Core Communities of the Venture and Startup Ecosystem Cultures**

The venture ecosystem began to take shape in the mid-1990s, particularly following the establishment of the Korea Venture Business Association (KOVA) in December 1995 and the launch of the KOSDAQ market in 1996.<sup>14)</sup>

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<sup>14)</sup> Some researchers argue that Korea’s venture ecosystem was officially born in the fall of 1997 with the passage of the Special Act on the Promotion of Venture Businesses. However, others suggest that its origins date back earlier.

The founding of KOVA marked the moment when the term “venture company” began to be used officially in Korea. It also represented the visible emergence of a cultural collective composed of individuals and companies that identified with the venture ethos, thereby giving rise to a culturally distinct startup ecosystem.

The first chairman of KOVA was Lee Min-hwa, and the second chairman, Jang Heung-soon, elevated the association to the level of one of Korea’s top six economic organizations.<sup>15)</sup> Since then, KOVA has evolved into a central institution within Korea’s venture ecosystem. It served as a kind of base camp for promoting venture enterprise. At its founding general assembly, the association proclaimed its “Venture Company Vision 2005,” declaring its ambition to restructure Korean industry around venture businesses within a decade—a vision that was later reflected in the Small and Medium Business Administration’s policy on venture promotion.

On the other hand, the *Venture Leaders Club*, a separate private organization, was founded on January 25, 2000. Whereas the Korea Venture Business Association (KOVA) functioned as a private association primarily composed of entrepreneurs embodying the venture spirit, the Venture Leaders Club brought together a broader spectrum of stakeholders—venture capital founders, academics, journalists, government officials, and political figures—who shared a commitment to advancing Korea’s venture ecosystem through a shared belief in the venture ethos.<sup>16)</sup>

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<sup>15)</sup> Daegy Byun evaluated that: “The Korea Venture Business Association, founded by the late Minhwa Lee, played a leadership role in society at the time. Composed mainly of young entrepreneurs in their late 30s, it functioned as a policy think tank that quickly institutionalized various systems and effectively created Korea’s venture ecosystem. Later, Minhwa Lee’s Creative Economy Research Association (founded in 2013) also demonstrated this societal innovator role, meeting the key requirements of a successful foundation—founders’ dedication, strong founder capabilities, and having a buyer of results like the National Assembly and the government.”

<sup>16)</sup> Mael Business Newspaper, August 4, 2020

In the later phase of the startup ecosystem, a new cultural current emerged, distinct from the venture-oriented ethos of the early 2000s, as major platform companies such as Naver and Kakao began supporting institutions like the Startup Alliance and the Korea Startup Forum. Launched in September 2016, the *Korea Startup Forum* serves as a representative body that advocates for the collective interests of startups in Korea.

### Shifting Composition of the Startup Ecosystem's Members

The characteristics of an ecosystem's culture are largely shaped by the attributes of its members. The concept of *staff*, or community participants, is a key element in understanding cultural dynamics.

In the early stages, first-generation venture entrepreneurs were largely centered around ICT-based manufacturing firms, which continue to dominate the sectoral composition of Korea's venture enterprises today. These firms typically operate with B2B business models and tend to affiliate with organizations such as the Korea Venture Business Association (KOVA) or the Korea Inno-Biz Association.

By contrast, startups are predominantly comprised of business-oriented ventures in internet services, e-business, and mobile gaming, and have organized themselves through platforms like the Korea Startup Forum. These firms primarily adopt B2C business models, including e-commerce and internet/mobile web service businesses.

Many of these startups are affiliated with the Startup Alliance or Korea Startup Forum, both of which are supported by major platform companies like Naver and Kakao. As a new generation of founders and employees with startup backgrounds began to perceive themselves as distinct from traditional venture firms, a clear cultural differentiation emerged.

This *startup subculture* developed out of the broader venture ecosystem, driven by differences in business technology, industrial culture (i.e., manu-

facturing vs. services), and the historical context in which each group emerged.

While the entrepreneurial spirit of first-generation venture founders and contemporary startup founders remains fundamentally the same, the perceived differences between the two can be attributed to variations in technological foundations, generational cohorts, and cultural contexts. First-generation venture entrepreneurs were often engaged in ICT and semiconductor-based B2B manufacturing businesses, whereas startups today are more likely to operate in sectors such as mobile distribution platforms and financial services.

From the 1980s until the eve of the IMF crisis, the organizational composition of venture firms in Korea was not significantly different from that of traditional SMEs. However, after the outbreak of the IMF financial crisis in December 1997, a qualitative shift occurred in the personnel makeup of venture firms. The IMF bailout served as a historical turning point that introduced greater flexibility into Korea's labor market, enabling more fluid job transitions and career mobility. This structural adjustment was accompanied by a broader sociocultural shift toward American-style norms and values.

Driven by IMF-imposed labor market reforms and corporate restructuring, a large number of skilled workers exited large conglomerates and entered the venture sector. As a result, the startup and venture ecosystem began to attract and benefit from a more highly qualified and diverse talent pool.

There have also been notable cases in which R&D personnel from large chaebol conglomerates founded bio-venture companies. When LG Chem faced difficulties during the 1997 IMF crisis, the company was reorganized in 2001 into LG Chem, LG Life Sciences, and LG Household & Health Care. Around this time, researchers from LG Chem's R&D center resigned and went on to establish new drug development bio-ventures in Daedeok.

Within the Daedeok bio-venture community, the late Dr. Choi Nam-seok, who served as the founding director of LG Chem’s R&D center, is widely referred to as the “Godfather of Korean Bio-Ventures.”<sup>17)</sup>

Since the 2010s, young entrepreneurs with overseas study experience or second-generation Korean Americans who had worked as venture capitalists in Silicon Valley have also entered the Korean startup ecosystem.

### Hero of the Korean Startup Ecosystem: Lee Min-hwa, the Godfather of Korean Ventures

Lee Min-hwa played a decisive and leading role in the creation and growth of Korea’s venture ecosystem, earning him the heroic title “Godfather of Korean Ventures.” In 1985, he founded Medison Co., Ltd., a medical device company specializing in ultrasound imaging equipment, which he successfully exported to dozens of countries around the world. Lee spearheaded the establishment of the Korea Venture Business Association (KOVA), serving as its inaugural chairman and playing a central role in fostering Korea’s venture ecosystem and promoting a culture of entrepreneurial challenge.

He exercised practical leadership in the legislative enactment of key policies and systems such as the *Special Measures Act on the Promotion of Venture Businesses*, the *Technology Collateral System*, and the *Stock Option System*. During the 1990s and up until Medison’s bankruptcy in 2002, countless aspiring entrepreneurs who gathered in Korea’s “Teheran Valley” – then the cradle of Korean ventures – regarded Lee as a role model. His influence ex-

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<sup>17)</sup> Dr. Namseok Choi graduated from Seoul National University’s Department of Chemical Engineering in 1958 and later pursued graduate studies in polymer chemistry in the United States.

He served as Head of the Biological Polymers Laboratory at the Korea Institute of Science and Technology (KIST) starting in 1974, then as Director of the Central Research Institute of Lucky Co. (now LG Chem) in 1980, and as Head of the LG Chem Technology Research Institute in 1995.

tended beyond venture entrepreneurs to inspire a generation of young people dreaming of launching their own startups.<sup>18), 19)</sup>

At the memorial forum held on August 3, 2020, for the late Lee Min-hwa, Byun Dae-gyu, CEO of Humax, remarked, “He was a man who embodied two vastly different roles: that of a business entrepreneur and a social innovator. He served as a bridge between Korea’s early economic engine—large corporations—and its future drivers—innovation-led enterprises” (*Maeil Business Newspaper*, August 4, 2020).<sup>20)</sup>

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<sup>18)</sup> [Venture Forum] “Minhwa Lee and the Dream of a Venture Powerhouse.”

<sup>19)</sup> Han, Jung-hwa, *Electronic Times*, February 14, 2002., Heungsun Jang, who founded TurboTech in 1989, recalled: “Watching Minhwa Lee founding a company, securing investments, and writing a success story shocked us. He was a senior who made us believe that we could also start businesses.” The success of Medison motivated young researchers in university labs, making them realize: “If you have the technology, you can launch a startup.” (Venture 30 Years: Events and Figures (1): Planting the Tree Called ‘Venture’ in the Desert, *Forbes Korea*, March 14, 2018.)

<sup>20)</sup> In 1995, he founded the Korea Venture Business Association and made a significant contribution to establishing the institutional foundations of Korea’s venture ecosystem through numerous policy proposals. Recognizing the need to foster technology-intensive small and medium-sized enterprises (SMEs) as a new growth engine, the government accepted recommendations from the industry, leading to the creation of the KOSDAQ exit market and the enactment of the Special Measures Act for the Promotion of Venture Businesses. At the time, he, along with fellow venture entrepreneurs, tirelessly traveled across the country to host startup roadshows. These efforts helped spark a venture startup boom and played a major role in overcoming the 1997 Asian Financial Crisis—the greatest national crisis Korea faced since the Korean War. ([Venture Forum] Lee Min-hwa and the Dream of a Venture Powerhouse, *Electronic Times*, Feb 14, 2002, column by Han Jung-hwa.)

## 4 Shared Values, Institutions, and Core Assumptions

### From Patriotism and Collectivism to Meritocracy and Individual Achievement

In the early stages of the Korean venture ecosystem, entrepreneurs demonstrated a strong sense of patriotism and collectivist culture, operating businesses with an “all or nothing” mindset. One of the most symbolic events that reflected the patriotic ethos of the Korean venture ecosystem was the development of the *Hangul* word processor, a Korean-language software created to rival Microsoft Word. A particularly iconic moment was the formation of the “Save Hangul Movement Headquarters” in July 1998, led by the Korea Venture Business Association (KOVA), the Hangul Society, and other civic groups.<sup>21)</sup>

On June 15, 1998, Microsoft and Hancom (the developer of *Hangul*) held a joint press conference at Lotte Hotel, announcing a deal in which Microsoft would invest \$20 million in the financially struggling Hancom, and in return, Hancom agreed to halt further development of *Hangul*. This announcement sparked national outrage, as the public viewed *Hangul*—a symbol of Korea’s software independence and national pride—as facing extinction at the hands of a foreign corporate power. What followed was a grassroots resistance reminiscent of patriotic militia movements, with the public rallying around the cause of defending Korea’s digital sovereignty.

Public sentiment, fueled by widespread media coverage and civic engagement, quickly snowballed. In response to KOVA’s appeal, the “National Campaign to Save Hangul” was launched, comprising 15 organizations including the Hangul Society. Lee Min-hwa, then Chairman of KOVA, played

<sup>21)</sup> [Top 100 Events\_046] Hangul Preservation Campaign. Electronic Times, July 1998.

a decisive role. Despite internal opposition from employees at his own company, Medison, Lee contributed 5 billion KRW in seed capital to acquire a stake in Hancm, ultimately helping to rescue the company from collapse.

Startup founders have increasingly embraced a culture of individualism. While rare among the earlier generation of venture entrepreneurs, figures like Byun Dae-gyu of Humax exemplified this shift. He actively promoted individualism, even advising employees, “Don’t work for the company—work for yourself.” His approach stood in stark contrast to the traditional corporate values of paternalism, familism, and lifetime employment, and he sought to adopt and disseminate alternative cultural values that emphasized personal agency and self-actualization.

### **Horizontal Relationships, Openness, Transparency, and Speed as Core Values**

Both venture companies and startups in Korea have consistently emphasized horizontal organizational structures and a culture of transparency, fostering respect for each individual employee. This reflects a broader “work culture innovation movement” that seeks to challenge and transform the conventional hierarchical management and rigid operational practices prevalent in traditional Korean conglomerates.

In the early stages, venture firms actively pursued values such as freedom, autonomy, equality, and individual dignity. They intentionally rejected the closed, hereditary-style corporate culture of chaebol conglomerates, instead cultivating organizational cultures characterized by openness and freedom. This cultural stance is reflected in the names of early ventures like Freechal and Geon-in (Humax), which symbolized their core values. Their commitment to autonomy and openness was also closely linked to anti-chaebol sentiment, reinforcing a counter-cultural identity.

Venture firms pioneered open organizational cultures, exemplified by

practices that encouraged free communication between hierarchical levels. Weekly “Hope Day” gatherings on Friday evenings facilitated candid conversations and broke down barriers between staff and management. These early experiments in management innovation were carried forward into the startup sector. For example, leading startups like Baedal Minjok (Woowa Brothers) and Toss introduced new communication models such as town hall meetings, promoting transparency, inclusiveness, and speed in decision-making.

A 2020 survey of job seekers found that 38.2% considered joining venture companies because they “expected a horizontal organizational culture,” while 32.8% said it was because they “wanted to take initiative in their work.” These results indicate that, even from an outsider’s perspective, the cultural identity of venture startups in Korea is clearly characterized by flat hierarchies and proactive, self-directed work.

This aspiration toward horizontality and non-hierarchical relationships remains a core cultural trait in the Korean startup ecosystem. Startups have made consistent efforts to internalize and institutionalize horizontal culture as part of their internal organization and management practices. One symbolic expression of this cultural shift has been the “breakdown of dress codes,” where business suits or uniforms are deliberately avoided in favor of casual attire. This move reflects a broader rejection of conformity in favor of diversity, individual respect, and personal expression.

The free and adventurous work culture of Korean startups has drawn direct inspiration from the startup ecosystem of Silicon Valley. Korean startups have benchmarked not only the technological innovation and rapid scaling associated with Silicon Valley but also its informal, horizontal, and autonomy-driven organizational culture.

## Adoption of U.S.-Style Management Practices such as Team-Based Structures and Annual Incentive Systems

Korean venture companies introduced horizontal organizational structures by implementing team-based organizations. Internally, they actively designed and operated flat organizational and relational structures, deviating from the traditional hierarchical titles and ranks commonly found in established Korean corporations.<sup>22)</sup>

Venture firms and startups embraced meritocracy and performance-based compensation, aiming to implement personalized and ability-centered management. They adopted merit-based HR systems, introduced annual salary schemes, and offered stock options as part of their compensation packages. These moves were influenced by benchmarking American business models, particularly Silicon Valley practices.

Startups also challenged Korea's entrenched night shift work culture by advocating for work-life balance. Many companies implemented flexible work hours or staggered working schedules and established wellness facilities to care for employees' mental health. This cultural shift was also inspired by Silicon Valley's startup ecosystem.

One symbolic embodiment of this transformation in workplace culture was the interior design of office spaces, where startups introduced lounges, in-house cafés, and bakery-style break areas—creating a more relaxed and

<sup>22)</sup> At the internet portal service venture company *Daum Communications* (CEO Lee Jae-woong), Jo Eun-hyung (30, female), who is in charge of public relations, has been carrying a new business card since the end of last month. Previously, her title was “Senior PR Officer.” Despite being the top person responsible for all PR matters, reporting directly to the CEO, she often faced uncomfortable situations because of the “senior” tag attached to her title. “When I handed out my business card, people would frequently ask if there was a PR manager or PR director, effectively dismissing me,” she said. Now, her new business card simply reads “PR Planner.” While people occasionally ask what the title means, the tendency to belittle her because of her title has completely disappeared. (*Ventures Should Adopt Venture-Appropriate Title Systems. Dong-A Ilbo*, February 24, 2000.)

creativity-friendly work environment that stood in contrast to the rigid formality of traditional Korean offices.

### Buying and Selling a Company Like a Product? - The Cultural Shock of M&A and the New Concept of “Exit”

Korea’s venture and startup ecosystem culture has been significantly shaped by the influence of Silicon Valley. One of the most jarring concepts for Korean startup founders in the 2000s—among the many mental models imported from the Valley—was the idea that a company could be bought and sold like a product in the M&A market (as noted in an interview with Professor Kim Youngbae).

In Korea, founders typically equated themselves with their companies. There was no distinction: the founder was the company, and the company was the founder’s extension or alter ego. The notion of selling the company was unimaginable—it wasn’t even considered as a possibility.

But in Silicon Valley, founders were told, “There’s someone who can run this company better than you—sell it.” For many Korean entrepreneurs and laypeople alike, this way of thinking came as a profound cultural shock.

Traditional mindsets are not easily changed, and for Korea’s first-generation venture founders, the notion of selling their company and executing an exit was difficult to put into action. The very idea that a company could be treated as an object of sale or purchase was neither culturally accepted nor previously imagined or experienced in Korean society. Selling a company often led to being branded a “hit-and-run opportunist” or, in extreme cases, even a “traitor to the nation.” The cultural stigma surrounding M&A and exits was deeply entrenched.<sup>23)</sup>

This kind of nationalist sentiment re-emerged as recently as 2018. When

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<sup>23)</sup> After selling *Appeal Telecom* to *Motorola*, the media largely stopped paying attention to Appeal Telecom.

Woowa Brothers, the company behind the popular food delivery app “Baedal Minjok,” announced its sale to Germany’s Delivery Hero for KRW 4.8 trillion, Korean social media exploded with sarcastic comments suggesting the brand should be renamed “Baedal German Minjok.” The media tone surrounding the deal was also largely negative.

That said, the trend of M&A has gradually taken root since the IMF crisis. Companies like Apel Telecom and Inet led the early wave of exits.<sup>24)</sup> In the later stages of the ecosystem, as venture capital gained influence, Silicon Valley’s VC-centered exit culture began to penetrate more deeply into the Korean startup scene.

### **From Dependency on Conglomerates to Self-Reliant, Technology-Driven Specialist Ventures**

Korean SMEs have historically maintained deeply dependent relationships with large conglomerates—so much so that the latter were often referred to as “parent companies.” This was no different for many early ICT venture companies, which relied heavily on these chaebols. A widespread belief in the invincibility of large firms (“too big to fail”) prevailed, reinforcing the perception that SMEs could only survive through exclusive subcontracting or supplier arrangements with big corporations. However, as the venture ecosystem began to take shape, this foundational assumption started to shift.

A growing number of venture companies and startups began pursuing independent technological competitiveness and striving to survive and grow as specialized, globally-oriented firms with their own capabilities. This movement gradually began to challenge the traditional paradigm of SME dependency. Nevertheless, the majority of SMEs and ventures still adopted business models focused on import substitution and localization. Moreover,

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<sup>24)</sup> *JoongAng Ilbo*. “Venture Entrepreneurs Cashing Out by Selling Stakes in Appeal Telecom, iNet, and Others.” October 17, 1998.

government policy has continued to treat SMEs as entities needing protection and support, rather than as independent actors capable of global competitiveness. As a result, the structural dependency between large corporations and SMEs remains a persistent issue in Korea's startup and industrial ecosystem.

## 5 Ecosystem Leadership

### Government-Led Leadership in the Startup Ecosystem

Until the early 2000s, Korea's startup ecosystem was largely driven by the private sector, centered around figures such as Lee Min-hwa and the Korea Venture Business Association. The primary focus of this early leadership was to create the necessary policy and legal infrastructure that would enable venture companies and venture capital to operate legitimately and receive governmental support.

Since the establishment of dedicated legislative and administrative bodies for venture policy in the 2000s, however, ecosystem leadership has shifted toward the public sector. Today, Korea's startup ecosystem is predominantly guided by government-led initiatives. Representative examples include the establishment of graduate schools of entrepreneurship, business incubators across the country, and the formation of Korea Venture Investment Corp. Through the policy funding programs of the Ministry of SMEs and Startups, entrepreneurship support units and graduate programs have been established at universities, and over 280 startup incubation centers have been created by universities and local governments nationwide.

Efforts to build and manage the startup ecosystem through public funding have persisted for nearly 30 years—this is a defining characteristic of leadership in Korea's startup ecosystem. In particular, the Roh Moo-hyun

administration's policy to "normalize" venture businesses reinforced the government-led leadership structure. Large-scale startup hubs have been established by central and local governments, becoming a consistent fixture in Korea's startup policy landscape.

Examples include over 20 regional *Technoparks* established since 1998, the *Seoul Startup Hub* launched in 2011, *Creative Economy Innovation Centers* created across provinces in 2014, the *TIPS Town* in Seoul's Yeoksam-dong built in 2015, and the ongoing development of *Startup Parks* since 2020. These facilities are often introduced as part of each new administration's policy pledges, and once institutionalized in the budget, they rarely disappear—instead, they persist under rebranded names and missions.

### From Venture Enterprises to VC-Driven Unicorn Scale-Ups

Although Korea's first-generation venture capital firms played a critical role in pioneering and advancing the country's venture capital market, the cultural center of the venture ecosystem remained largely rooted in the industrial actors—namely, venture companies. This focus on the entrepreneurial firm continues to this day. Yet, a startup ecosystem comprises a broader set of players beyond the firms themselves, including investors, government bodies, universities, and corporates—each of whom contributes to shaping and evolving the culture of the ecosystem.

Since the 2010s, the cultural leadership of Korea's startup ecosystem has gradually shifted beyond the firm level, increasingly influenced by actors from the investment side. Notably, a wave of global venture capital firms founded by Korean-American entrepreneurs—such as Altos Ventures, Primer Sazze Partners, and Big Basin Capital—have entered the Korean market. Backed by U.S. and other overseas LPs, these firms have actively invested in Korean startups.

Altos Ventures, in particular, has played a pivotal role in Korea's unicorn<sup>25)</sup>

expansion by investing in major players like *Coupang*, *Woowa Brothers* (*Baemin*), *Krafton*, *Tada*, *Danggeun Market*, *Toss*, and *Zigbang*. Beyond capital, Altos provided Silicon Valley - style management guidance and networking, contributing not only to the creation of domestic unicorns but also to the global expansion of Korea's startup ecosystem.

## 6 Future Challenges for Korea's Startup and Venture Ecosystem Culture

Over the past four decades, Korea's startup ecosystem has grown and matured significantly, both qualitatively and quantitatively.<sup>25</sup> So much so, in fact, that many countries have benchmarked Korea's ecosystem, considering it on par with top-tier ecosystems such as those in the United States and Israel.

What, then, must be addressed—specifically from a cultural perspective—for Korea's startup ecosystem to further advance in both quality and scale?

One possible reason Korea lacks a “Silicon Valley” of its own is the absence of an *American-style startup ecosystem culture*. While Silicon Valley has continuously produced world-first innovations such as the personal computer, Google, and ChatGPT, Korean ventures and startups have often found themselves scrambling to imitate the technologies and business models pioneered by American startups.

Though government-led leadership has greatly expanded the infra-

<sup>25</sup>) A *unicorn* refers to a privately held company valued at over USD 1 billion. The term began to be used in the startup ecosystem in the early 2010s, drawing on the image of the mythical creature—the unicorn—to signify how rare and elusive such companies are.

<sup>26</sup>) Lee, Choon-woo. (2016). *20 Years of Korean Ventures*. Venture Business Association (KOVA).

structure and programming for startups—resulting in a diverse and well-funded ecosystem—Korea still has yet to produce a startup with *truly global influence*. Despite large-scale investments in regions like Pangyo Valley and Guro Digital Complex (G Valley), these zones have not yielded the kind of groundbreaking, world-first innovations or business models seen in Silicon Valley.

Ironically, it was during the earlier, more organically driven phase of Korea’s venture ecosystem—led by private sector pioneers like Lee Min-hwa in the 1990s and early 2000s—that Korea saw the emergence of globally innovative services such as *Dialpad*, one of the world’s first internet telephony technologies. This, in fact, laid the foundation for today’s voice chat and VoIP services like VoiceTalk.

The reason why companies in Silicon Valley are not afraid of failure and are willing to take risks is because of the socio-cultural environment and the educational system that nurtures entrepreneurs. It is important to note that the Silicon Valley ecosystem is rich in capital and is supported by top-tier universities like Stanford and UC Berkeley, which provide cutting-edge technologies and a pool of high-quality, skilled talent and entrepreneurs. Furthermore, there is the presence of the U.S. market and the global market, which further drives innovation. A key feature of the Silicon Valley ecosystem is its market mechanism, which fosters competitive innovation among startups. Only startups with strong technological competitiveness, like Google, Apple, Facebook, Twitter, and Uber, are able to survive and grow.

In contrast, Korea’s startup ecosystem, largely shaped by government-led small and medium enterprise (SME) support policies and funding, is believed to have a significant number of “zombie startups”—startups that survive solely due to financial backing, without the capability to innovate or compete. While Silicon Valley is often compared to a “jungle,” the Korean startup ecosystem is sometimes likened to a “greenhouse or garden.”

In Silicon Valley, failed entrepreneurs find it easier to restart their ventures. Even if they fail, their technological knowledge and entrepreneurial spirit transform failure into a learning experience and an asset for their next startup attempt. This is a crucial element that has allowed Silicon Valley to thrive. In contrast, the Korean startup ecosystem still tends to stigmatize failure, often marking it as an irreversible label. There is a need to continue transforming this mindset in Korea to allow entrepreneurs to view failure as an opportunity for growth rather than an insurmountable setback.

In the Korean startup ecosystem, there is still a practice wherewards are not differentiated significantly based on individual abilities and performance. Moreover, the excessive reinforcement of labor rights protection laws, driven by the Korean government and labor unions, is undermining the vitality of the Korean startup ecosystem.

In Korea, the stock option system has lost its original function. This is due to the deeply rooted cultural sentiment in Korea that emphasizes “equity” and “anti-wealth sentiment,” which discourages citizens from earning large amounts of money. In Silicon Valley, executives and employees who earn high salaries do not hesitate to work overtime and on weekends to make their startups successful. The responsibilities are high, and the workload is considerable. Interestingly, a similar attitude can be observed in Korea’s first-generation venture ecosystem culture. Additionally, the lack of labor unions and the highly flexible employment and dismissal practices are key features of the Silicon Valley ecosystem. In Silicon Valley, it is common to see large-scale layoffs affecting entire business units of 500 to 1,000 employees, which is nearly impossible in Korea.

Currently, the leadership of the Korean startup ecosystem is still driven by the government. Although it has been publicly advocated for more than a decade to shift towards a private market-driven venture ecosystem, in reality, the influence of the government is only growing and becoming more

dominant. The fundamental task at hand is to shift from a government-led startup ecosystem to a private market-driven startup ecosystem culture.

There is also room for improvement in the cultural consciousness of startups. The startup culture, which implicitly imitates and follows the behaviors of large corporations, needs to be reformed. While the culture of first-generation venture companies was less hierarchical than that of conglomerates, a vertical and hierarchical structure still exists. The founders and their core groups, based on ties such as academic connections or family relations, make key management decisions in a closed and hierarchical governance structure. In early 2023, internal conflicts over performance compensation and employee evaluations at major information technology (IT) companies, along with issues such as workplace harassment leading to suicide (Naver) and job insecurity with ‘Reboot teams’ (employees on leave) at Nexon, were reported in the media. While these issues might arise due to the large scale of companies, they could also be a result of blurred entrepreneurial ideals.

The culture of not respecting businesses or entrepreneurs needs to be continually improved. A major issue is the strong anti-business sentiment and the traditional socio-cultural values in Korea that disregard or look down upon companies. Kim Bong-jin, the founder of Woowa Brothers, which operates “Baedal Minjok,” argued that creating a societal atmosphere that respects entrepreneurship is a crucial cultural task for the future of Korea’s science and technology ventures.

Kim Bong-jin stated, “It is unfortunate that despite entrepreneurs creating jobs and significant social value, entrepreneurs are still less respected in society compared to other professions, such as athletes, and the value created by entrepreneurs is often undervalued” (Maeil Business Newspaper, August 4, 2020). In 2019, Kim Bong-jin sold Woowa Brothers for 4.8 trillion KRW and stepped down from management.

Additionally, there is a need to foster a culture of mutual cooperation and partnerships between corporations and venture companies, as well as promote an open innovation culture. Overcoming the resistance to innovative startup businesses like “Tada” and “Rotok,” which face societal and established interests, is a challenge. A shift in societal and cultural attitudes toward risk, perceptions of entrepreneurs, fairness in opportunities, as well as the activation of entrepreneurs and entrepreneurship in various sectors such as women entrepreneurs, regional entrepreneurs, generational entrepreneurs, social ventures, social entrepreneurship, and global entrepreneurship, will be essential.



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Part **3**

Strategies for the  
Development of  
Korea's Startup  
Ecosystem





## Chapter 10 Challenges and Strategic Directions for the Sustainable Growth of Korea's Startup Ecosystem



## Chapter 10

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# Challenges and Strategic Directions for the Sustainable Growth of Korea's Startup Ecosystem

1. Future Strategies for Korea's Startup Ecosystem
2. Cultural and Societal Transformation

Thus far, we have examined the historical development, current status, and strategic directions for future growth of Korea's startup ecosystem, analyzed by key actors and environmental components. In this concluding section, we aim to synthesize these strategic proposals into an integrated, macro-level framework. The goal is not only to elevate the global standing of Korea's startup ecosystem but also to present pathways for achieving a new phase of economic advancement through productive linkages and convergence with the existing industrial ecosystem.

## 1 Future Strategies for Korea's Startup Ecosystem

The key conditions for a vibrant startup ecosystem include abundant funding, a highly skilled talent pool, access to broad markets, a business-friendly institutional environment, active interaction and collaboration among core stakeholders, and the continuous emergence of successful cases. By these standards, Korea's startup ecosystem—despite having grown to rank among the world's top ten—is currently facing critical growth limitations due to the following structural issues.

First, venture capital for startups is predominantly driven by government initiatives, resulting in a high dependency on public budgets and an overall lack of sufficient capital scale. Second, most startup activities remain confined within domestic boundaries. Korean startups have yet to meaningfully expand into global markets or attract and leverage foreign capital and talent within Korea. Third, approximately 85% of startup formation and investment is concentrated in the Seoul metropolitan area. Except for a few regions such as Daejeon, startup activity in non-metropolitan areas remains significantly underdeveloped. Fourth, startup activity and investment are heavily concentrated in ICT services, biotechnology, gaming, and digital con-

ment sectors. In contrast, there is relatively limited activity in manufacturing sectors such as materials, components, and equipment, as well as in emerging convergence industries. Fifth, Korea's industrial production and exports are highly concentrated among conglomerates, and the linkages between the startup ecosystem and this incumbent corporate ecosystem remain weak. Collaboration and integration between these two spheres are still in the early stages.

To overcome these limitations and advance Korea's startup ecosystem to a world-class level, it is essential to expand the scope of startup activities not only in terms of geographic reach but also across industries and markets—both quantitatively and qualitatively. This expanded landscape must become a magnet for global venture capital and entrepreneurial talent.

Geographically, Korea must transcend the inherent constraints of a small domestic market and limited resource base by internationalizing the ecosystem itself. In parallel, the current Seoul-centric ecosystem must be broadened to include regional industrial ecosystems across the country. From an industry and market perspective, the scope of startup activity must also be diversified and extended. Regulatory reform is urgently needed to prevent startups from being stifled by conflicts with legacy stakeholders in newly emerging industries driven by digital transformation. Furthermore, public procurement of innovative products and services developed by startups should be significantly expanded.

To ensure meaningful integration between the startup ecosystem and the existing conglomerate-led industrial ecosystem, proactive efforts are required from conglomerates, ecosystem support institutions, and the government.

Ultimately, the success of these initiatives hinges not only on the efforts of core ecosystem stakeholders but also on a societal shift across political, economic, social, and cultural dimensions—toward greater respect for entrepreneurship and broader recognition of successful entrepreneurs as role

models. With this foundation in place, we now turn to a detailed examination of each key area.

### Quantitative and Qualitative Growth of the Startup Ecosystem

To begin with, the quantitative growth of the startup ecosystem is essential. Currently, Korea's startup ecosystem accounts for approximately 10% of total employment and production within the national economy. This share should be expanded to around 30%, similar to the level observed in the United States. To support this growth, the scale of venture investment must be significantly increased—from the current 0.5% of GDP to approximately 1%, equating to an annual investment volume of roughly KRW 20 trillion.

However, it is critical to clearly delineate the roles of public and private funds. Government-backed funds should focus on early-stage startups, deep tech sectors, and regionally based ventures outside the capital area. In contrast, private funds should primarily target the growth and scaling of more established startups. Regulatory easing and expanded tax incentives for purely private funds are needed to attract broader participation from conglomerates, mid-sized enterprises, insurance companies, universities, and other potential limited partners (LPs). In addition, private-sector secondary funds and fund-of-funds, including those based overseas, should be permitted to catalyze larger investment inflows into startups.

As proposed in Chapters 3 and 5, the role of universities within the startup ecosystem must be substantially enhanced—not only as incubators for prospective entrepreneurs but also as fund investors. While Korean universities' endowment funds remain extremely small compared to those of foreign institutions,<sup>1)</sup> more than 90% of even these limited assets are allocated

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<sup>1)</sup> As of the end of 2021, Harvard University's endowment fund was valued at USD 53.2 billion (approximately KRW 76 trillion), whereas the endowment funds of private universities in Korea are significantly smaller. For example, POSTECH (Pohang University of Science and Technology) manages approximately KRW 2 trillion, Hongik University KRW 728.8 billion,

to principal-guaranteed safe assets. In contrast, universities in the United States and Singapore allocate over 70% of their endowments to equities, bonds, and startup-focused funds, yielding long-term annual returns of around 10%.

Korean universities must expand the scale of their endowments and establish independent foundation entities with professional investment committees. These committees should pursue long-term, diversified, and systematized investment strategies. Entrusting capital to private fund managers such as venture capital firms should also be considered to increase direct investment in startups. By doing so, universities can play a more active role in the ecosystem—not only by supporting entrepreneurship education and incubation, but also by expanding seed-stage direct investments and indirect investments through venture capital or accelerator vehicles.<sup>2)</sup>

These efforts should ultimately enable a broader range of exit strategies for startups beyond the traditional IPO-centric model.<sup>3)</sup> In particular, M&A must be actively promoted as it provides an attractive mechanism for early-stage investors to realize returns. To this end, the expansion of M&A-focused funds, the activation of Special Purpose Acquisition Companies (SPACs), the scaling of Corporate Venture Capital (CVC) arms, and improvements in the effectiveness of M&A brokerage markets are all essential. IPOs and M&As should be positioned as equally viable exit options within the

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and Ewha Womans University KRW 636.1 billion.

<https://www.sedaily.com/NewsView/29VZENVIJ9>,

<https://www.hankyung.com/article/2023041738601>

- 2) An example is KAIST's Youth Startup Investment Holdings Company, which was established through donations from the SK Group and has been investing over KRW 1 billion annually since 2016, primarily at the seed stage with a focus on social enterprises.
- 3) Regarding exit strategies, in the United States and Europe, mergers and acquisitions (M&A) account for about 37% of startup exits. In contrast, in Korea, M&A exits account for only 2%, while initial public offerings (IPOs) represent 23%. Korea needs to enhance the diversity of exit channels beyond IPOs.

ecosystem.

Moreover, alongside equity-based investment funds, it is necessary to expand the use of debt-based funds to ensure a stable volume of startup financing regardless of macroeconomic cycles. The government has recently announced the establishment of the “Startup Korea Fund,” a public-private joint initiative aimed at accelerating the transition toward private-led venture capital. This fund is expected to concentrate its investments in three strategic areas: deep tech, global market expansion, and exit strategies including secondary markets.

The shift away from a one-size-fits-all startup support model—centered on grants and subsidies—toward a more diversified approach that combines equity and debt financing represents a positive and necessary evolution in policy.

In addition to quantitative expansion, the startup ecosystem must be structured for sustainable qualitative growth. To achieve this, ecosystem strategies must shift to facilitate the emergence of not only unicorns but also globally competitive venture firms capable of succeeding in overseas markets. This requires a transition from a “hunter-gatherer” model—focused on discovering and supporting nascent startups—to a “cultivation and development” model that nurtures and scales ventures over time.

Such a shift demands a reorientation of policy from prioritizing new company formation to emphasizing startup scale-up. This includes supporting pre-launch business validation through planned, strategy-driven entrepreneurship and providing tailored support across various growth stages to increase the proportion of successful startups.<sup>4)</sup>

In fact, quantitative and qualitative growth can form a self-reinforcing virtuous cycle. The emergence of successful unicorns and global ventures attracts additional venture capital and top-tier talent into the ecosystem. This

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<sup>4)</sup> Kim, Sun-Woo & Oh, Yu-ri. (2022)

influx, in turn, accelerates startup formation and ecosystem expansion, ultimately increasing the likelihood of new “baby unicorns” or pre-unicorn startups with innovative business models and global scalability.

In this context, the alignment between Korea's science and technology policy and its small business and startup policy must be significantly strengthened. Although Korea has one of the highest R&D investment-to-GDP ratios in the world, it has often been criticized for insufficient scientific and technological outcomes. This is largely due to several structural issues: a disproportionate share of R&D investment is channeled to large conglomerates; investment and capabilities in basic science remain relatively weak; and commercialization and startup creation based on university and research institute technologies are notably low.

Therefore, it is crucial to strengthen the pipeline that links R&D outcomes to the creation of technology-based startups. This requires a transformation in performance evaluation metrics—from a narrow focus on publications and patents to metrics that emphasize commercialization results. Furthermore, industry-academia collaboration systems must be reformed to facilitate not only information and technology exchange but also the free movement of human capital between universities, research institutes, and enterprises.

In particular, open innovation platforms and intermediary institutions—such as accelerators and technology transfer organizations—must play a more active role in facilitating talent exchange and collaborative R&D between conglomerates and startups.

To accelerate entry into a virtuous cycle of startup growth, regulatory reforms are also needed to invigorate secondary markets for unlisted venture equity and ease restrictions on crowdfunding. Enhancing labor market flexibility for venture talent—including reforms to the rigid 52-hour workweek system, expanding part-time employment options, and improving related

pension and welfare systems—is also critical. Establishing a robust intellectual property rights (IPR) framework for protecting technology and knowledge, and activating markets for M&A and licensing, will further contribute to ecosystem dynamism.

To foster entrepreneurial talent, it is essential to integrate entrepreneurship education into middle and high school curricula as well as university programs. Beyond instilling global citizenship and domain-specific expertise, education systems should provide experiential learning opportunities that simulate real-world business challenges. This requires a shift toward the “Entrepreneurial University” model, where students are encouraged to explore venture creation as a legitimate post-graduation pathway. For young founders entering the startup ecosystem, support must go beyond financial aid to include mentorship, livelihood support, and a safety net that allows for second chances in the event of failure.

Only when society embraces entrepreneurship as a legitimate and valued pursuit—recognizing the risk-taking and value creation involved—and respects successful entrepreneurs as role models, can the startup ecosystem achieve sustainable advancement. Equally, entrepreneurs must actively uphold their end of the social contract: sharing the value they create with society, adhering to principles of fair competition and ethical management, and investing in the next generation of founders through a robust “pay it forward” culture.

### **Internationalization of the Startup Ecosystem**

According to a comparative study on the startup ecosystems of six countries—the United States, China, Japan, the United Kingdom, Germany, and France<sup>5)</sup>—Korea displays a number of distinct characteristics. While Korea

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<sup>5)</sup> Kim, Young-hwan et al. (2021). International Comparative Study to Enhance the Competitiveness of Korea's Startup Ecosystem. Science and Technology Policy Institute

demonstrates relatively high entrepreneurial intention and startup formation rates, a significant proportion of these ventures are necessity-driven, resulting in the lowest survival rate among the countries studied, as well as a relatively small share of high-growth startups. Excluding large domestic markets such as the U.S. and China, Korea ranks the lowest in terms of internationalization within its startup ecosystem.

Given Korea's limited domestic market, it is essential to prioritize the global expansion of existing startups as well as the creation of born-global ventures that are designed to compete internationally from inception. While outbound internationalization—Korean startups entering overseas markets—is critical, inbound internationalization is equally important. This includes attracting foreign capital and talent into Korea's startup ecosystem by enhancing flexibility in financial and labor markets.

To address this, the Korean government has launched several initiatives. It plans to establish a KRW 2 trillion “Startup Korea Fund” by 2027 to support deep-tech ventures and promote global expansion. Additionally, the government has initiated the creation of a global startup hub called Space K, which aims to make it easier for foreign entrepreneurs to launch startups in Korea. The initiative also includes support for Korean entrepreneurs founding startups abroad, and the newly launched Global TIPS program will offer matching investment support to startups that receive funding from qualified international venture capital firms.

Further measures include easing visa requirements for specialized professionals (E-7 visas) in designated industries, and developing Space K in the Seoul metropolitan area into a collaborative global hub where entrepreneurs from around the world can co-create and launch ventures.<sup>6)</sup>

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(STEPI), April 21, 2021.

<sup>6)</sup> “Only 5 Korean Unicorns Among Global Top 100 ...Why? We Asked the Government.” Source: Money Today.

Complementing these domestic efforts are international partnership initiatives, such as the 2022 Korea - U.S. Startup Summit. Through this platform, the Korean government has been working to build cooperative networks with global corporations like Oracle and foster co-investment platforms between Korea's Fund of Funds and global venture capital firms. It is also increasing investment support for Korean startups operating overseas.

To ensure the success of these globalization efforts, several complementary strategies must be implemented.

First, Korea must actively promote born-global startups—those designed from the outset to compete in international markets. Given that approximately two-thirds of certified Korean venture companies are B2B enterprises whose main clients are domestic conglomerates or SMEs, a transition to globally oriented business models is essential for the internationalization of Korea's startup ecosystem. Born-global startups must deliberately design their products and services with global market entry in mind from the early development stage.

A notable example is Azar, the video chat application developed by Hyperconnect. Despite the founders' lack of prior international experience, they designed the service for overseas markets from the start. As a result, 99% of the company's revenue and users came from outside Korea. This global-first orientation enabled Hyperconnect to be acquired by Match Group in the United States for approximately KRW 2 trillion in 2021.

To foster the development of born-global startups, universities and startup support institutions must offer aspiring founders structured opportunities for international engagement. For example, the National University of Singapore operates student exchange programs with top science and engineering institutions abroad. These programs go beyond academic coursework and include internships at local startups, facilitated by

dedicated staff who identify placements and coordinate exchanges. This model offers valuable insights for Korea. Upon returning, these globally connected individuals are more likely to pursue entrepreneurship with a stronger international orientation and collaborative networks.

Second, in the context of global demographic decline, the competition to attract top talent is intensifying. Korea must employ a comprehensive inbound strategy to draw global capital and talent into its domestic startup ecosystem.

This requires offering stronger incentives for foreign venture capital investment through tax relief, regulatory streamlining, and relaxed licensing requirements. Beyond general partners (GPs), limited partners (LPs) should also be incentivized to invest directly in Korea. These foreign investors bring not only capital but also access to global networks, knowledge, and operational expertise. In fact, startups that secure investment from leading global VCs often receive substantial strategic support—ranging from business model refinement to international market entry and partner identification.

To strengthen the competitiveness of domestic accelerators, Korea must also expand strategic alliances with global partners. The government must play a role in removing regulatory barriers and providing financial incentives to encourage foreign VCs, accelerators, and investors to participate in Korea's startup ecosystem.

At the same time, Korea should expand efforts to attract top international students and foreign entrepreneurs through active startup immigration policies. While the D-8-4 startup visa system exists, it remains overly restrictive, with complex application, issuance, and renewal procedures—rendering it less accessible than equivalent systems in advanced economies. Similarly, the E-7 visa, currently focused on foreign language instructors, must be restructured and reoriented to target skilled professionals with scientific expertise and entrepreneurial potential. It is now imperative to en-

hance both the legal framework and the operational effectiveness of these programs.

Japan, which is already experiencing severe population decline, has taken bold steps to shift away from its historically closed stance on immigration. In 2019, it established the Immigration Services Agency (ISA) and created a national strategy, coordinated across central and local governments, to transform Japan into a country “chosen by foreign talent.”<sup>7)</sup>

In Korea, while there remains a need for foreign workers in 3D industries and service sectors, the strategic focus must shift toward attracting high-level professionals who can lead innovation and establish startups. This means not just recruiting talent, but transforming Korea into a country that top global entrepreneurs and professionals actively choose to come to. This calls for a major paradigm shift in government policy.

France offers a compelling benchmark. Through the “French Tech Visa,” it provides up to four years of residency for foreign startup employees and investors. This not only appeals to those wanting to live in Paris but also strategically targets globally capable entrepreneurs and investors. Since 2008, the French government—regardless of political administration—has maintained consistent national startup policies, actively supporting entrepreneurship and business creation by both domestic and foreign founders through administrative facilitation and a competitive business environment.

Korea must follow a similar path: elevating the inherent attractiveness of its startup ecosystem while simultaneously fostering a foreigner-friendly socio-economic and cultural environment. Ultimately, inbound talent strategies can only succeed if Korea is perceived as a relatively attractive destination for business creation, living, and education by global entrepreneurs.

Korea already has several advantages to leverage—rising global interest in K-culture, strong inflows of international students and tourists, and globally

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<sup>7)</sup> <https://www.joongang.co.kr/article/25164453>

competitive industrial capabilities in semiconductors, displays, and supply chain infrastructure. These strengths must be deployed strategically. At the same time, improvements in housing, education, and overall quality of life for foreigners are essential. Such measures are not optional—they are fundamental to positioning Korea as a leading startup hub in the 21st century.

### **Strategies for Revitalizing Regional Startup Ecosystems**

Establishing robust startup ecosystems anchored in regional innovation clusters is an urgent priority for Korea. As outlined in Chapter 8, Korea's globally recognized startup ecosystem remains highly concentrated in the Seoul metropolitan area. To address not only the widening disparity between Seoul and non-capital regions, but also to cultivate new engines of economic growth through entrepreneurship, it is imperative to develop startup ecosystems across the country and foster interregional collaboration to generate synergistic impact.

To activate regional startup ecosystems, local governments should center their efforts around the existing Centers for Creative Economy and Innovation (CCEI), and focus on domain-specific strengths unique to their regions. This includes enabling university and research institute talent to transition into startup founders by providing capital, management support, early market access, and linkages to external success stories. Sharing best practices through benchmarking of successful models is also critical.

In this process, it is important to recruit experienced entrepreneurs or ecosystem experts—especially those with broad networks and proven success—to play a leading role in shaping the local ecosystem. These experts can act as ecosystem builders or anchor mentors. Local governments, in turn, should focus on removing regulatory bottlenecks and providing administrative and operational support services. The Hefei model introduced in Chapter 8 offers valuable lessons for Korea, even though its aggressive pub-

lic-sector-driven approach may reflect the more centralized authority structure of China.

Nevertheless, Korean local governments should adopt the philosophical stance of the Entrepreneurial State, as proposed by Mariana Mazzucato,<sup>8)</sup> whereby public-sector actors proactively take on innovation risks and help create new markets to stimulate startup ecosystem development. Regional governors and mayors must also act as entrepreneurs themselves—actively securing funds, investing in human capital development, and fostering long-term collaboration among key ecosystem stakeholders by offering well-designed incentive structures.

### Regulatory Reform for Innovation in Emerging Industries

Regulatory reform to enable startups and venture firms to enter new markets is a critical challenge that must be addressed to advance Korea's startup ecosystem. Conflicts between startups with innovative business models and incumbent stakeholders have become recurring obstacles, as evidenced by numerous high-profile cases: Tada versus the taxi industry, LawTalk versus the Korean Bar Association, Gangnam Unni versus the Korean Medical Association, Zigbang versus the Realtors Association, and Ssem versus the Tax Accountants Association. These conflicts highlight the persistent structural friction between startups leveraging digital platforms and traditional industries—tensions that are likely to intensify in the era of the Fourth Industrial Revolution.

While the Korean government has expressed strong support for en-

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<sup>8)</sup> According to Professor Mariana Mazzucato (2013), a “Entrepreneurial State” refers to a government willing to bear the risk of failure and make bold investments, especially in emerging technology sectors characterized by high uncertainty. For example, during the “AI Winter” of the 1980s, Canada took a long-term perspective, expanded funding for AI research, attracted top global experts to Canadian universities, and nurtured a new generation of researchers, ultimately positioning Canada as a leader in deep learning and AI innovation.

trepreneurship, deep-tech startups, and digital industrial transformation, paradoxically, many innovative business models in Korea are significantly delayed compared to those in global innovation leaders due to entrenched resistance from vested interests. In response, the government introduced the Guidelines for Identifying Negative Regulations in Emerging Industries in October 2017.<sup>9)</sup> However, in practice, regulation remains largely based on a positive-list approach, whereby only explicitly permitted activities are allowed. Regulatory sandboxes have provided limited breathing room, but the systemic shift to a negative-list approach—where all activities are permitted unless specifically prohibited—has yet to materialize.

The core reason for this inertia lies in the lack of a collective sense of urgency. Korean society has yet to fully internalize the gravity of industrial disruption and the need for innovation and startups as engines of national economic renewal.

To reiterate: for Korea's startup ecosystem to reach a world-class level, the regulatory approach toward emerging markets must undergo a fundamental transformation. Government regulation must shift decisively from preemptive controls to self-regulation, ex post enforcement, and negative-list frameworks.<sup>10)</sup> When managing conflicts between emerging and legacy industries, regulators should prioritize a clear and evidence-based evaluation of consumer welfare gains. This principle must become the primary lens through which new business models are assessed.

As a highly export-dependent economy, Korea must adhere to global regulatory standards and adopt a flexible, innovation-enabling approach to regulation. Without such changes, the country will face significant constraints in fostering unicorns and globally scalable startups. Both central and

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<sup>9)</sup> A “comprehensive negative regulatory system” refers to a regulatory approach where, in principle, all activities are permitted except those explicitly prohibited. It encompasses concepts such as ex post regulation, minimal intervention, and broad-based interpretation.

<sup>10)</sup> Kim, Sun-Woo & Oh, Yu-ri. (2022)

local government officials responsible for regulatory oversight must deepen their understanding of the negative regulatory philosophy, while the National Assembly must rise above short-term stakeholder pressures and place long-term national competitiveness at the center of policy decisions.

### **Expanding Public Procurement and Subsidies for Innovative Startup Products and Services**

As digital transformation and decarbonization accelerate, new industries are rapidly emerging. These shifts are not only birthing entirely new sectors—such as artificial intelligence and advanced ICT—but also transforming existing industries, as seen in the transition toward eco-friendly vehicles and green energy systems. To ensure that startups can capitalize on these opportunities, both the government and public institutions must play an active role as early adopters of innovative products and services developed by startups.

In the United States, a global leader in startup development, government procurement—especially in defense and healthcare—has been instrumental in nurturing deep-tech startups. More recently, the Biden administration has introduced the Inflation Reduction Act (IRA), with subsidies totaling USD 369 billion, and the CHIPS and Science Act, allocating USD 288 billion, to stimulate demand for startup-developed technologies in energy, climate, and semiconductors. Similarly, China has focused on market creation through large-scale purchasing subsidies in sectors such as electric vehicles and battery ecosystems.

In Korea, the government has also introduced an “innovative procurement” system to promote public sector purchases of new technologies and products developed by SMEs and startups. This policy allows for pilot purchases funded by the Public Procurement Service and enables direct, non-competitive contracting for a three-year period. While this is a promis-

ing tool for expanding market access in sectors like digital transformation and decarbonized energy, its impact is highly contingent on the government's commitment to execution.

To institutionalize and scale this initiative, Korea should implement an “Innovation Procurement Target Management System” that mandates a fixed percentage of public procurement budgets—both at the central and local government levels, as well as across public institutions—to be allocated toward innovation-driven purchases. Additionally, mirroring U.S. practices, Korea should enact a new legislative framework—tentatively titled the “SME Procurement Promotion Act for Domestic Products in Materials, Components, Equipment, and Green Sectors.” This law would provide direct subsidies to encourage the purchase of domestically produced hardware, software, and systems developed by SMEs and startups in sectors critical to digital and energy transitions, including solar, wind, and related infrastructure.

These targeted policy interventions are essential not only for scaling innovative startups but also for accelerating Korea's industrial transformation and building resilience in strategic technology domains.

### **Strategies to Maximize Synergy Between Multi-National Corporations and Startups**

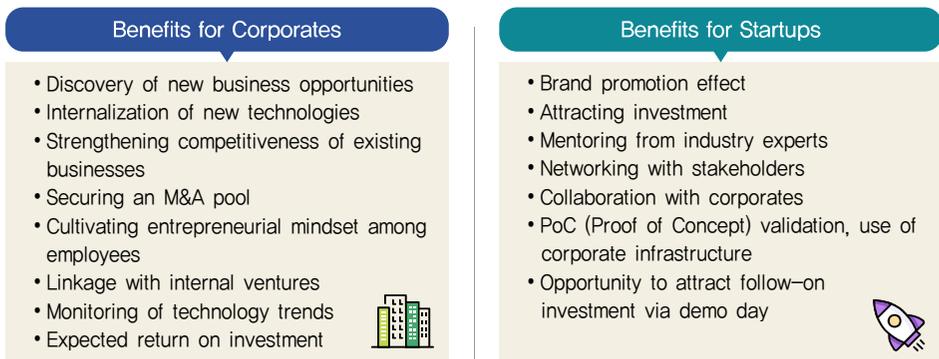
Korea possesses world-class industrial competitiveness through its conglomerates in sectors such as semiconductors, displays, automobiles, petrochemicals, steel, and shipbuilding. At the same time, there has been a surge in entrepreneurial activity targeting emerging markets and new business opportunities created by the Fourth Industrial Revolution, digital transformation, and advances in biotechnology and healthcare.

As discussed in Chapter 6, the relationship between conglomerates and startups in Korea is more complementary than competitive, offering sig-

nificant synergy potential. Collaboration and partnership initiatives between the two have already begun to take shape across various industries.

From the perspective of startups, conglomerates offer access to markets, critical technologies, talent, and capital—resources that are often otherwise out of reach. For early-stage startups in particular, being a partner, supplier, or portfolio company of a major conglomerate can serve as a valuable reference point, accelerating global market entry. [Figure 10-1] summarizes the mutual benefits of collaboration between conglomerates and startups.

**Figure 10-1 Mutual Benefits of Cooperation Between Corporates and Startups**



Source: Yongkwan Lee, *Open Is Harder Than Innovation*, July 20, 2023.

For conglomerates, collaboration with startups has long served as a means of capturing new business opportunities, developing future growth engines, and enhancing the competitiveness of core businesses. This has included in-house ventures, corporate venture capital (CVC), and investments via external VC funds. In addition, large and mid-sized firms increasingly pursue startup acquisitions—so-called *acqui-hires*—as a strategy for acquiring top-tier technical or managerial talent.

As highlighted in Chapter 6, large and mid-sized firms have played a crucial role in the development of Korea's startup ecosystem, not only by pro-

viding capital but also by serving as a source of talent and business opportunities. A significant share of Korean startups traces their origins back to established corporations, rather than universities or research institutes. Major players such as Naver and Kakao emerged from Samsung SDS, and many CEOs of certified venture firms previously held leadership or technical roles in conglomerates.

The role of conglomerates in startup investment has grown substantially in recent years. Following the 2021 revisions to the Fair Trade Act and the Capital Markets Act, there has been a surge in the establishment of CVCs by corporate holding companies.<sup>11)</sup> As of May 2023, 52 out of 82 conglomerate groups in Korea (63%) have invested in startups, and 30 (37%) operate standalone investment entities. In 2022, conglomerates and incumbent enterprises invested approximately KRW 4.5 trillion in domestic startups—representing more than 30% of the total KRW 14 trillion in venture capital investment.

Despite this progress, the full potential of corporate-startup collaboration remains underutilized. Several structural barriers persist. Many CVCs are still in their early stages and lack the incubation capabilities and strategic coherence of more mature operations. There remains a disconnect between CVC investment activities and the parent company's broader open innovation strategy, and in many cases, corporate CVCs function more like traditional independent venture capital funds, rather than as integrated strategic arms.

Beyond institutional maturity, the deeper cause of limited success lies in cultural and managerial mismatches—particularly a lack of mutual trust. conglomerates in Korea have historically operated under vertically integrated, execution-focused organizational cultures. These cultures—rooted in hierarchical structures, industriousness, operational speed, and loyalty—were

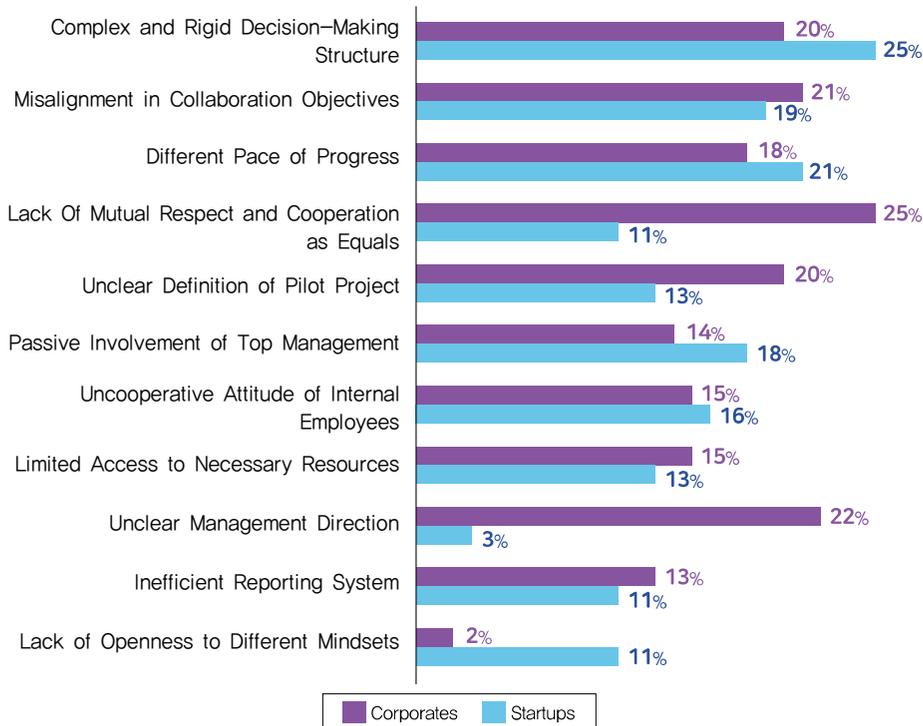
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<sup>11)</sup> <https://www.asiae.co.kr/article/2022111715012288431>

highly effective in scaling manufacturing businesses through fast-follower strategies over the past 40 years.<sup>12)</sup>

However, such managerial frameworks are poorly suited for the fast-paced, experimentation-driven environments of online platforms and mobile-based business models. In sectors such as online gaming, internet portals, and mobile platforms, startups—not incumbents—have emerged as the dominant players. This is not coincidental; it reflects the systemic difficulty traditional corporations face in launching disruptive new ventures under legacy organizational constraints.

**Figure 10-2** Key Failure Factors in Collaboration Between Corporates and Startups



Source: BCG Analysis, Q4 2018.

<sup>12)</sup> Lee, Hong et al. (2015)

Conglomerates in Korea have increasingly recognized these challenges and, as a strategic alternative, pursued open innovation through partnerships with external startups and venture firms. However, despite this shift in strategy, legacy management practices and rigid organizational cultures remain significant barriers to effective collaboration. [Figure 10-2] illustrates the primary causes of failure in corporate - startup partnerships.

Startups and venture firms, by nature, thrive on agility, rapid iteration, and the ability to pivot in response to market changes—traits essential for creative innovation. These characteristics are fundamentally at odds with the hierarchical and bureaucratic cultures that still prevail in many conglomerates. In such environments, startups struggle to survive, let alone innovate effectively.

Therefore, for collaborations with startups to yield meaningful results, conglomerates must undergo internal transformation. This includes adopting more flexible decision-making structures, embracing risk-taking, and fostering a culture that supports experimentation and fast-paced iteration. Without this foundational shift, even well-intentioned strategic partnerships are unlikely to deliver sustained impact. Organizational agility is not just a startup trait—it must be embedded into the DNA of incumbent firms seeking to leverage the full potential of external innovation.

### **Strategic and Organizational Transformation in conglomerates**

For Korea's large corporations to effectively harness innovation and talent—whether by cultivating intrapreneurs internally or partnering with external startups—fundamental changes in corporate strategy, organizational culture, and employee competencies are required. At a minimum, executives and staff involved in startup collaboration must shift from a managerial mindset to an entrepreneurial mindset. This transformation demands a long-term orientation built on trust-based partnerships, supported by reforms in perform-

ance evaluation systems, incentive structures, and organizational norms.

While top executives—especially owner-CEOs—often strive to maintain a dynamic balance between core and new businesses from a long-term perspective, middle managers and business unit leaders frequently default to short-term performance metrics. This is driven by performance appraisal systems, compensation frameworks, and perceived implications for career advancement. Case studies of open innovation initiatives in large corporations consistently reveal that the most significant obstacles stem from Not Invented Here (NIH) syndrome among middle managers and their defensive attitudes aimed at job preservation.<sup>13)</sup>

Addressing these issues is critical not only for deploying ambidextrous organizational models that can simultaneously manage core and exploratory businesses<sup>14)</sup> but also for ensuring the success of open innovation efforts.<sup>15)</sup> A notable example is IBM. Despite being the top patent-generating company in the U.S. for nearly three decades starting in 1993, IBM struggled to deliver substantial results in new business development. Upon taking over as CEO in 1999, Louis Gerstner identified the root cause: the company's organizational and managerial systems were optimized for existing operations but ill-suited for launching new ventures. In response, IBM established the Emerging Business Opportunity (EBO) program to create a distinct organizational and managerial model for new business creation.<sup>16)</sup>

As shown in [Table 10-1], the strategy, organizational structure, performance measurement, and leadership style required for existing businesses—focused on exploiting current capabilities—differ fundamentally from those needed for exploring and commercializing new capabilities. Moreover, em-

<sup>13)</sup> The NIH Syndrome (Not-Invented-Here Syndrome) refers to an exclusionary attitude that refuses to recognize technologies or innovations developed externally., Lee, Yong-gwan. Open Is Harder Than Innovation. Presentation material at J Dialog, July 20, 2023

<sup>14)</sup> O'Reilly and Tushman (2004)

<sup>15)</sup> Keinz et al. (2012)

<sup>16)</sup> <https://www.discerningreaders.com/ibm-patent-leadership.html>

empirical research confirms that open innovation efforts can only succeed when supported by organizational cultures that are collaborative, trust-based, and built on fair and transparent systems of performance evaluation and reward.

**Table 10-1 | Characteristics of Exploitative vs. Exploratory Business Types**

Exploitative Business (Established Corporations)		Exploratory Business (Startup Ventures)
Cost and Profit	Strategic Intent	Innovation and growth
Operational Efficiency and Incremental Innovation	Critical Tasks	Adaptability, New Product Development, Radical Innovation
Operational Capability	Capability	Entrepreneurial Capability
Formal, Mechanistic Structures	Organizational Structure	Loose Adaptive Structure
Profit Margin and Productivity	Control and Compensation	Milestones and Growth
Efficiency, Risk Aversion, Quality, Customer Focus	Culture	Risk-taking, Speed, Flexibility, Experimentation
Authoritative, Top-down	Leadership Role	Participatory, Visionary

Source: Kim Youngbae, "Korea's Venture Ecosystem: Performance and Challenges," JReport 14, March 13, 2023 (Quoted)<sup>17)</sup>

The case of Haier in China offers meaningful lessons for Korean conglomerates seeking to innovate and grow through collaboration with the startup ecosystem. It demonstrates the depth of strategic and organizational change required for large corporations to fully leverage innovation and talent from both internal intrapreneurs and external venture partnerships.

#### Haier's Customer-Centric Open Innovation and Venture Ecosystem Model

Haier, a global leader in home appliances, began as a latecomer to the industry in 1984. Yet since 2005, the company has transformed itself from a hierarchical, vertically integrated organization into a venture ecosystem—driven by customer-centric innovation through its Rendanheyi model. This transformation reorganized all

<sup>17)</sup> This case study is a revised and supplemented version of: Kim, Young-bae. (2023). Korea's Venture Ecosystem: Achievements and Challenges. J Report 14.

business units and shared service functions into independent entrepreneurial units—called platforms and Xiaowei—each granted autonomous decision-making authority and performance accountability. These units are not governed by bureaucratic hierarchies but operate through a decentralized, mutually beneficial network governed by market mechanisms and equity ownership.

[Figure 10-3] illustrates the organizational structure of Haier's platforms and Xiaowei units.

Xiaowei (Micro-Enterprises) are small, self-contained business entities with operational and strategic autonomy. Ownership may be shared among Haier's headquarters, participating employees, and in some cases, external investors. Xiaowei leaders have decision-making authority over business strategy, hiring, HR, and profit distribution. Employees are not paid a base salary; instead, their compensation is fully performance-based and tied to the Xiaowei's success.

Xiaoweis are classified into three categories:

- ① **Incubation Xiaowei:** These are newly formed, customer-oriented startups. They are created through:
  - Internal proposals by Haier employees,
  - Recruitment of entrepreneurial teams via internal contests,
  - Open calls to external entrepreneurs via roadshows.

A representative case is ThundeRobot, the first Xiaowei, founded in 2013 by three Haier employees passionate about gaming. They developed and sold a 15-inch gaming laptop, filling a niche in a market then dominated by PCs. With limited seed funding from a business unit, they conducted rigorous customer feedback analysis and partnered with Quanta Computers in Taiwan for product development. Their initial batch of 3,500 laptops sold out in 20 minutes on JD.com. This success enabled them to raise RMB 1.2 million (approx. KRW 200 million) from Haier, alongside RMB 400,000 of personal investment (for a 20% equity stake) and additional venture capital. By 2017, ThundeRobot had IPO'd on China's NEEQ with a valuation of RMB 1.2 billion (approx. KRW 200 billion). It has since expanded into a full gaming platform with over 3 million subscribers, offering services such as video streaming, e-sports tournaments, VR gear, and gaming accessories.

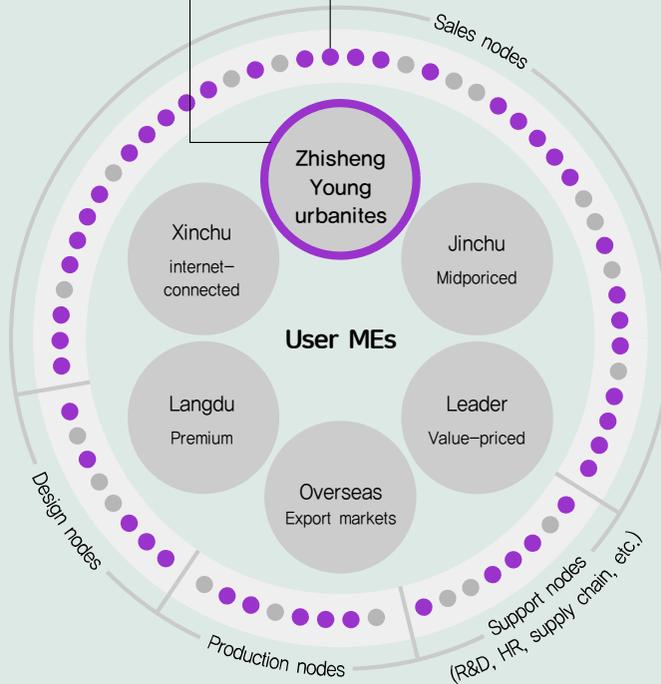
- ② **Transformative Xiaowei:** These are spin-offs from existing business units transformed into small, autonomous entities focused on legacy product lines—such as small home appliances. Haier currently operates over 200 such units.

③ **Ecosystem Xiaowei:** These 3,800+ units provide support services such as design, HR, manufacturing, sales, and distribution to Incubation and Transformative Xiaowei. They receive compensation for services rendered, but their contracts can be terminated if customer satisfaction falls below expectations. Consequently, Ecosystem Xiaowei operate like independent ventures under constant pressure to remain competitive and customer-responsive.

**Figure 10-3 Organizational Structure of Haier's Rendanheyi Venture Ecosystem**

Each industry platform has a small number of market-facing "user" MEs, serving different segments...

... and many "node" MEs dedicated to providing services and components to user MEs on the platform. The nodes supporting the Zhisheng user ME are shown in purple here.



Any user ME is free to hire and fire nodes as it sees fit—or to go outside for services if it believes an external provider can better meet its needs.

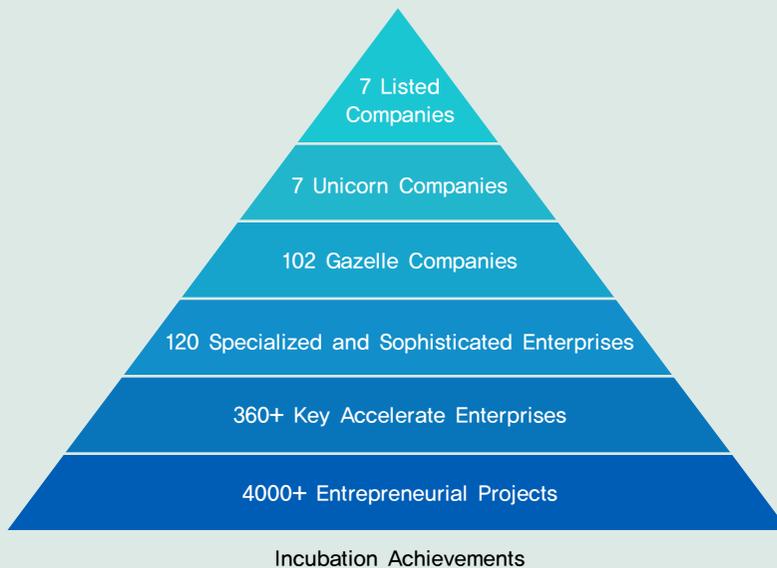
Source: Hamel, G. and Zaini, M. (2018). The End Of Bureaucracy, Harvard Business Review, 56

Platform Organizations exist at the corporate, industry, and product line levels. They prevent business overlap among Xiaowei, promote shared component usage, coordinate investments in core technologies and equipment, manage external partnerships, identify and disseminate best practices, and mediate inter-platform relationships. Platform owners are jointly accountable—alongside Xiaowei leaders—for ensuring product and service compatibility. They also act as lead shareholders and strategic coaches for Xiaowei, guiding decision-making and profit-sharing frameworks. Moreover, they play an entrepreneurial role in launching new Incubation Xiaowei to drive the platform's long-term growth.

Haier headquarters assumes eight key roles in this model:

- ① Acting as a venture capital/accelerator by providing capital and resources to Xiaowei,
- ② Offering shared functional services and best practices,
- ③ Identifying and training potential entrepreneurs,
- ④ Delivering internal incubation services,

**Figure 10-4 Haier's Venture Startup Achievements**



Source: Haier Website (Accessed February 25, 2023)

[https://www.haier.com/global/haier-ecosystem/?to=2&spm=net.32002\\_pc.header\\_150046\\_20200720.2](https://www.haier.com/global/haier-ecosystem/?to=2&spm=net.32002_pc.header_150046_20200720.2)

- ⑤ Designing governance norms and cultural principles for external partnerships (e.g., customer orientation, win-win collaboration, autonomy, openness),
- ⑥ Establishing short- and long-term performance evaluation models suited for new ventures,
- ⑦ Creating an environment that continuously fosters innovation, and
- ⑧ Defining long-term vision and strategic direction for emerging businesses.

As of 2023, Haier's venture ecosystem boasts the following outcomes [see Figure 10-4]:

- 7 IPOs,
- 7 unicorns,
- Approximately 580 funded startups,
- Over 4,000 projects in the incubation pipeline.

Haier now views all employees as potential venture founders. However, this transformation has not come without cost—more than 30,000 employees have exited the organization after failing to adapt to the new model.<sup>18)</sup>

First, large corporations must fundamentally redesign their business models and strategies to function as open innovation platforms. This involves not only forming partnerships or acquiring startups but also transforming internal structures to enable agility and experimentation. The organization itself must adopt open, horizontal structures and foster a culture of trust and collaboration.

For example, Cisco—a company renowned for its acquisition & development strategy—evaluates cultural compatibility as part of the M&A due diligence process. Additionally, former employees of acquired startups are often involved in evaluating and integrating new acquisitions. This helps ensure smooth communication and conflict resolution between Cisco and newly acquired startups, reflecting an advanced organizational capacity to absorb external innovation.

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<sup>18)</sup> This case study is a revised and supplemented version of: Kim, Young-bae. (2023). *Korea's Venture Ecosystem: Achievements and Challenges*. J Report 14.

To replicate this model, Korean conglomerates must go beyond traditional M&A or supplier partnerships. They must shift away from legacy management and performance evaluation systems and embrace fundamentally different approaches that support innovation. As proposed in Chapter 6, this transformation requires the active commitment and strategic leadership of the CEO. It also calls for the identification and development of ambidextrous managers—those who can operate effectively within existing organizational structures while understanding the culture, pace, and incentives of startups. These individuals act as translators between two very different worlds and are critical enablers of value co-creation.

Second, Korean conglomerates must address trust issues—especially around the misappropriation of startup technologies and the fair distribution of economic value. As illustrated by Cisco's A&D (Acquisition & Development) and P&G's C&D (Connect & Develop) models, successful open innovation is underpinned not only by scale-up capabilities but also by reputational capital. That is, the market must perceive the corporation as a fair and credible partner that respects the intellectual property and business contributions of its startup counterparts.

Startups naturally prefer to partner with large corporations that not only have the capability to help them commercialize and scale their technologies, but also demonstrate a commitment to fair value-sharing. From a long-term strategic perspective, it is only when corporations build a culture and organizational capability for such collaborative partnerships that ecosystem-level synergy can be realized.

In both the U.S. and China, large tech firms that began as startups themselves—such as Google, Amazon, Alibaba, and Tencent—have internalized these operating principles and cultural norms. As a result, they have been able to successfully execute partnerships, joint ventures, and M&As with startups as part of their core innovation strategies.

However, it is worth noting that in certain contexts, excessive M&A concentration can distort fair competition. For instance, prior to COVID-19, Alibaba, Tencent, and Baidu accounted for nearly 50% of major M&A deals in China's digital economy. Startups that secured investment from these tech giants often gained not just capital but access to superior infrastructure and strategic support, giving them an overwhelming competitive edge. Conversely, those that did not receive such backing were frequently driven out of the market.<sup>19)</sup>

This underscores the need for balanced ecosystem governance—one that promotes innovation and collaboration, but also safeguards diversity, fairness, and competitive dynamics.

### **Role of Accelerators as Facilitators in Corporate-Startup Collaboration**

Despite growing efforts, fundamental tensions often persist between large corporations and startups due to their differing interests and operating philosophies. Startup founders generally welcome investment and business support from large corporations, but they are typically resistant to interference or demands for concessions that prioritize the corporation's outcomes over their own. Conversely, while corporations may be genuinely interested in supporting startup growth, they are often ultimately driven by their own strategic priorities. These structural asymmetries—combined with divergent management styles, organizational cultures, and differing valuations of intellectual property—can significantly undermine trust and productive collaboration between the two parties.

In this context, accelerators are emerging as effective intermediaries capable of bridging the gap between corporations and startups. For example, Bluepoint Partners, a deep-tech-focused accelerator, has been actively foster-

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<sup>19)</sup> Economist, Alibaba and Tencent have become China's most formidable investors, Aug 2nd 2018.

ing collaboration between startups and major Korean conglomerates such as GS and Hansol.

From 2020 to 2023, Bluepoint operated the Hansol V-Frontiers program, a structured collaboration platform that matched startups with Hansol Group's affiliates. Over four cohorts, 21 startups were selected through a highly competitive process. These startups participated in a six-month program that included product-market fit validation by Bluepoint and commercialization feasibility assessments conducted by Hansol's in-house strategy experts. Selected teams were given opportunities to pilot business projects with Hansol affiliates, secure up to KRW 1 billion in funding, and compete for additional prize awards of up to KRW 90 million based on their final Demo Day performance.

In a similar initiative, Bluepoint launched the The GS Challenge in 2021 in partnership with GS Group affiliates including GS Energy, GS25, GS The Fresh, GS SHOP, and GS Fresh Mall. Startups selected through the program secured investments—one received KRW 3 billion from GS Energy, and another even appointed a GS Energy executive to its board. Other participating startups leveraged Hansol's internal manufacturing and energy optimization data to co-develop machine learning solutions and secured commercial contracts and joint investments from both GS Energy and Bluepoint.<sup>20)</sup>

These cases demonstrate the value of accelerators in facilitating structured, mutually beneficial corporate - startup partnerships. Importantly, the role of the accelerator extends beyond matchmaking. Leading accelerators such as FuturePlay also act as cultural and strategic translators—understanding both the risk-taking, agile mindset of startups and the performance-oriented, structured approach of large corporations.

In a landscape where “openness is harder than innovation,” the strategic

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<sup>20)</sup> “Bluepoint: A Leader in Open Innovation, Dreaming of Win-Win Cooperation Between Startups and Large Corporations.” Source: hankyung.com

value of accelerators lies in their ability to manage this complexity. Their credibility with both sides, capacity to de-risk early-stage partnerships, and deep insight into technology and market dynamics enable them to serve as neutral enablers of collaboration.

As Korea's open innovation ecosystem matures, the role of accelerators must evolve further—from startup incubators to ecosystem orchestrators—helping align corporate objectives with startup capabilities in a way that promotes scalable innovation and sustainable partnerships.

### Government Policy

The Korean government has also recognized the importance of mutually beneficial cooperation between large corporations and startups, and is actively working to foster the startup ecosystem. As part of these efforts, the government has launched platform initiatives to support collaboration between startups and large firms and recently announced regulatory easing to allow corporate venture capital (CVC) funds operated by large enterprises to accept up to 40% of their investment from external sources.<sup>21)</sup> Although these collaborative platform initiatives remain in their early stages and few success cases have emerged thus far, the government's push to facilitate deeper involvement by large corporations in the startup ecosystem is a step in the right direction.<sup>22)</sup>

Nevertheless, the implementation of these efforts should be informed by international precedents. For instance, in China's startup ecosystem, BAT (Baidu, Alibaba, Tencent) once played a dominant role. In 2017, nearly half of Chinese unicorns were funded by BAT, and the acronym "B-to-BAT" emerged to describe the prevailing exit model: targeting acquisition or equity

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<sup>21)</sup> "Only 5 Korean Unicorns Among the Global Top 100 — How Is That Possible? We Asked the Government." Source: mt.co.kr

<sup>22)</sup> Ministry of SMEs and Startups, Press Release. A New Win-Win Cooperation Ecosystem Between Large Corporations and Startups Is Opening. October 16, 2020.

investment by one of these tech giants. These companies not only had access to abundant capital but also owned platforms and business assets that offered direct market access. As a result, startups backed by BAT held significant competitive advantages, fueling the emergence of unicorns across sectors such as e-commerce, entertainment, fintech, and edtech.

However, since the Chinese government blocked the IPO of Ant Financial in 2021, the influence of BAT and other large tech firms (including Xiaomi and JD.com) has declined from over 50% to roughly 21% of the startup ecosystem. In their place, state-owned enterprises (SOEs) and local governments have become far more prominent players. In alignment with the Xi Jinping administration's policy focus on technological self-reliance, the composition of Chinese unicorns has shifted from consumer-facing and digital finance sectors to deep tech domains such as semiconductors, robotics, AI, software, and biotech. Geographically, while Beijing, Shanghai, and Shenzhen remain core hubs, activity has increasingly diversified into manufacturing-intensive regions such as Guangzhou and Hefei. For example, Guangzhou Automobile Group (GAC), a state-owned enterprise, has taken on a central role in the future mobility ecosystem by investing in and collaborating with startups in batteries, electric vehicles, and ride-hailing services.<sup>23)</sup>

China's increasing state involvement in the startup ecosystem reflects more than just a desire to counterbalance bigtech or achieve technological sovereignty—it also represents an effort to define a new economic growth model. This model, sometimes described as “state capitalism,” sees the government setting strategic industrial goals and mobilizing capital for R&D and startup investment to build national value chains. However, as exemplified by the Hefei model, some regions are moving toward a hybrid approach: rather than exercising direct control over firms, local governments support startup investment through information and talent exchange, risk-sharing,

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<sup>23)</sup> Economist. How to make it big in Xi Jinping's China. 2023.4.24.

administrative facilitation, and aggressive regulatory simplification. These efforts combine the short-term efficiency of private enterprise with the long-term strategic consistency and credibility of government. As a result, regional ecosystems of collaboration between SOEs, large corporations, and startups are beginning to take shape in key industries.

In the United States, the Inflation Reduction Act (IRA) and the CHIPS and Science Act represent similar efforts to build national competitiveness in key industries under the logic of economic security. Countries are investing heavily in technologies and supply chains across sectors such as semiconductors, renewable energy, AI, digital transformation, mobility, and healthcare. These transformations present both unprecedented opportunities and existential threats to Korea's current and future industrial base.

Given these global trends, the Korean government must proactively set a strategic vision and launch coordinated policies to create globally competitive platforms for large corporation - startup collaboration in strategic industries. For each core industry, the government can lead *vision-setting* processes by convening key stakeholders from both large corporations and startups, along with subject-matter experts, to build consensus on the long-term direction.

Based on this vision, platform ecosystems can be established, centered around large corporations with global supply chains and go-to-market capabilities. These platforms should include startups with diverse business models and supporting service organizations across the value chain. The government's role would then be to:

- Establish fair rules for information sharing, market access, and value distribution among platform partners,
- Remove regulatory barriers to both horizontal collaboration and vertical integration (*regulatory reforming*),
- Coordinate stakeholders (*coordinating*),

- Monitor and deter unfair practices (*monitoring*),
- Promote trust-based collaboration cultures,
- Facilitate cross-sector engagement between large and small firms,
- Provide targeted *funding* support, and
- Invest in foundational *platform infrastructure* as a preemptive public good.<sup>24)</sup>

The Korean government has made considerable efforts to revitalize the startup ecosystem. Building on this foundation, it is now imperative to strengthen collaboration and integration between the startup ecosystem and the traditional industrial ecosystem to create new engines of economic growth. The time has come to establish a national strategy that enables large corporations, mid-sized enterprises, and startups to enhance global competitiveness in legacy industries while simultaneously pioneering future industries. This strategy should be grounded in platform-based collaboration –designed to foster mutual cooperation and fair competition across all stakeholders.

## 2 Cultural and Societal Transformation

Benjamin Klein<sup>25)</sup> proposed a framework connecting *microbehavior*—the self-interested actions of individual firms or economic agents—with *macro-performance*, referring to industry-level progress, societal wealth, and overall welfare. Among the four firm types he identified, the most desirable from a macroeconomic perspective is the *happy warrior*—a firm that actively pur-

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<sup>24)</sup> National Academy of Engineering of Korea, Industrial Future Strategy Committee. Korea 2040: An Irreplaceable Nation. Presentation, November 14, 2023.

<sup>25)</sup> B. Klein (1977). *Dynamic Economics*. Harvard University Press.

sues innovation. In contrast, firms driven by *conservation-of-power rationality*, which aim to maintain the status quo, may enhance their own survival but contribute little to broader societal progress.

To ensure that the self-interested behaviors of individuals and firms translate into industry advancement and collective well-being, it is essential to establish a clearly shared set of societal values, guiding philosophies, and strategic paradigms. Although Adam Smith famously argued that the “invisible hand” of the market would naturally align private incentives with public good, in reality, microbehavior and macroperformance frequently diverge—leading to systemic tension and conflict. Even when these contradictions surface, it is the prevailing socio-cultural and organizational values that ultimately mediate and reconcile such conflicts over the long term, enabling innovation to diffuse its welfare-enhancing effects across the economy and society.

Silicon Valley provides a powerful illustration of this dynamic. There, even when entrepreneurs and venture capitalists generate substantial value through new technologies and business models, they typically retain only a portion of that value. The remainder is distributed to users, partners, and the local community, thereby increasing social welfare. This alignment between microbehavior and macroperformance is not accidental—it is supported by an ecosystem built on shared cultural values and institutional norms that guide how startups are created, scaled, and integrated into the broader economy.

For Korea's startup ecosystem to evolve in a similar direction, all core stakeholders and institutional actors must commit to a culture where the value created by startups and entrepreneurs is not only respected, but also aligned with the long-term socio-economic progress of the nation. Entrepreneurs, venture capitalists, and support institutions must share in a cultural consensus that emphasizes their role in contributing to societal ad-

vancement—not merely private gain.

This requires a societal value system grounded in:

- Free-market driven, creative competition and innovation;
- Respect for individual capabilities and entrepreneurial risk-taking;
- Trust, collaboration, and openness;
- Corporate citizenship and social responsibility;
- A balanced embrace of ESG (Environmental, Social, and Governance) principles.

As discussed in Chapter 2, fostering a *pay-it-forward* ethos is key. Likewise, Chapter 7's argument for phasing out *joint surety requirements* aims to reduce fear of failure. Chapter 9 highlights the need to shift from a *government-led* to a *market-driven startup ecosystem*. Cultural tendencies to emulate large conglomerates must also be revised. Respect for entrepreneurs must be institutionalized. A culture of partnership between large firms and startups, openness to innovation, and societal acceptance of disruptive business models must take root.

Only then can Korea's startup ecosystem fully integrate with the broader industrial base to form the second major engine of national economic growth.



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