


RESEARCH ARTICLE

The rise and development of the platform economy in South Korea

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(Received 25 April 2022; accepted 10 June 2022)

Abstract

Noting the growing importance of online platforms, this paper discusses the rise and development of the platform economy in Korea, defining platforms as a business model and arguing that the platform economy requires financing, an environment for Internet use and users, services, and content. Many believe that the platform economy's development is a natural outcome of technical innovation. However, the platform economy was created by the interplay of government and corporate strategies under certain historical conditions. In Korea, the platform economy developed after the 1997 Asian financial crisis. Presenting the IT industry and venture businesses as a solution to the crisis, the government helped finance venture companies through intensive investment and enhanced the strategy of building information and communication infrastructure. Platform companies suffered from the lack of content and services to provide; however, they quickly built web portal platforms with Korean specificities by copying and benchmarking personal computer communication services.

Key words: PC communications; platform economy; South Korea; venture company; web portal

Online platforms are increasingly gaining significance with advances in digitalization and online networking; Google, Meta (Facebook), Amazon have become a venue for almost all human activities, including relationship-building. In just 20–30 years, it has become hard to imagine life without online platforms. With their growing presence in many areas of our lives, online platforms have become a major business model in the economic sector. Today, serving as a space for online exchanges and transactions, platforms extract activities and resources, convert them into data, and make a profit using algorithms (Kenney and Zysman 2016, pp. 64–65; Rosenblat 2018; Schor and Attwood-Charles 2017; Zuboff 2019). In other words, when people post text or upload videos on online platforms such as Google and Meta, these companies collect data from these posts to utilize for business purposes, such as earning advertising revenue. Google, Amazon, Apple, Microsoft, Apple, Netflix, and Meta have become the most dynamic sector that spearheads economic growth both in the U.S. and around the world, significantly impacting business management and economic activities (Jin 2015; Kenney and Zysman 2016, p. 61; Langley and Leyshon 2017, pp. 12–13; Rahman and Thelen 2019, pp. 178–79; Vallas and Schor 2020; Van Dijck, Poell and de Waal 2018).

Various platforms including web portals, social media services, messengers, and commerce apps are also growing their presence in various sectors in Korea,¹ which has shown fast growth in digitalization and networking (KISA 2019). On August 27, 2020, Naver and Kakao, Korea's leading platform companies, ranked third and seventh in the Korean stock market capitalization, beating several

¹Unless otherwise indicated, references to Korea in this article refer to the Republic of Korea/South Korea.

conglomerates (*chaebols*²) such as Hyundai Motor Company (Hankookilbo 08.27. 2020). Boosted by the impact of the COVID-19 pandemic, platform companies are leading the stock markets in Korea, the U.S., and China, with the phenomenon of the platform economy appearing across a wide range of business sectors. Then, when and how did the platform economy emerge in Korea? What are the characteristics of the early platform economy in Korea? This article explains the rise and development of the platform economy in Korea, which has been absent from academic discussion despite its significance.

The development of the platform economy is often simply summarized as an outcome of technological innovation (Rahman and Thelen 2019, p. 180). This means that the platform economy evolved from advances in information technology, the spread of the Internet, and the ubiquity of smartphones. However, when explaining the rise and development of the platform economy, historical conditions and government and corporate strategies are either equally important or sometimes even more important than technological innovation. The platform economy's speed of development and shape likely hinge on its initial spatiotemporal conditions and how government policies and corporate strategies influence it. In other words, adequate attention to historical conditions and both government and corporate strategies will help us to grasp its uniquely Korean aspects and the universality of the platform economy.

In this study, online platforms are defined as a business model. The study proposes that, for the platform economy to work, it requires not only technological breakthroughs or innovations, but also three basic elements: (1) funds, (2) platform environment and users, and (3) services and content needed by users. That is, for a platform company to do business, it must have access to funds, a large number of people who can use its platform on the Internet, and provide services and content that appeal to users. When the three elements are in place, a platform company can serve as a space for online exchanges and transactions and generate profits by extracting user activities and resources. However, this process may also lead to a bubble in the financial market, corruption scandals caused by collusion between the state and companies, and monopoly.

This study defines the period of rise and development as between the 1997 Asian financial crisis and 2005 before Web 2.0 and user-created content trends had started making waves in Korea. The study explains how the three essential elements of the platform economy were created during its development in Korea. Therefore, it is argued that the platform economy in Korea was created through the interplay between government strategies to overcome the 1997 financial crisis and the business strategies of newly emerging Internet companies such as Kakao and Naver. It has also been asserted that Korea's platform economy represents both the universality of the platform economy and the unique Korean context. Local online platform companies, such as Kakao and Naver, have provided online community services to increase users, and have launched news and webcomics services. Online channels have become the central means for relationship building and communication among people, and the media market and the cultural product market have begun to change. They were able to survive the competition with global online platforms.

This study is organized as follows. First two sections present key issues to explain the development of the platform economy. Third section describes the Korean government's strategy to foster a platform economy; it details why and how the government implemented a drive to develop the platform economy in the context of the 1997 economic crisis and how underlying problems were expressed. Fourth section describes the strategies employed by Kakao and Naver and examines what strategies they took to win the fierce competition and their outcomes. Last section summarizes the results of the analyses and discusses the implications of the platform economy's emergence in Korea.

Rise and development of the platform economy

Today, the online platform business is the most dynamic sector in the global economy as the leading hegemonic model in capitalism (Cusumano, Gawer and Yoffie 2019; Cutolo, Hargadon and Kenney 2021).

²A chaebol is a diversified and large-scale conglomerates form of capital governed by an owner and owner's family (Kim 2019, p. 23).

Despite a long and colorful history of economic platforms that have been a part of the economy all along, the history of the online platform business model spans less than three decades. In the U.S., the platform business gradually expanded through a combination of government and corporate measures against the economic crisis in the 1970s and financial bubbles and investment in built environments in the 1990s (Jin 2015; Srnicek 2016, pp. 36–39).

In the modern world, online platforms have become a venue for various economic networking and transactions between individuals and groups. Platform companies such as Google, Meta, and Amazon extract user activities and resources, convert them into data, and run algorithms to match and earn profits (Kenney and Zysman 2016, pp. 64–65; Langley and Leyshon 2017, pp. 15–17; Rosenblat 2018; Schor and Attwood-Charles 2017; Van Dijck, Poell, and De Waal 2018; Zuboff 2019). Platform businesses provide infrastructure that brokers various user groups and both creates and relies on network effects. This process involves a strong tendency toward monopoly (Cennamo and Santalo 2013; Eisenmann, Parker and Van Alstyne 2006; Frenken 2017; Gawer and Cusumano 2002; Langley and Leyshon 2017; Rahman and Thelen 2019). Businesses reduce or eliminate the price of services or goods on one hand while raising the price of other services or goods on the other to compensate for losses from price reductions or clearances, having designed a core architecture that governs the interaction possibilities. All these characteristics make platforms key business models for extracting and controlling data (Srnicek 2016, pp. 43–48). When platforms get more popular, users can benefit from lower prices and access to more data-driven services, the entire market coalesces around the platform. But powerful network effects of platforms may result in winner-take-all dynamics and may pose significant risks to their ecosystem.

Considering the nature of platforms, the platform economy is the product of three interlinked elements that are necessary for all businesses but particularly important in online platforms. First, those who start a platform business must be able to raise funds easily. Funding is the starting point and foundation of business for all companies and platform companies need venture capital that can make bold investments in new businesses based on new technologies (Harvey 2010, pp. 48–51; Kenney and Zysman 2016; Klinger-Vidra 2016; Langley and Leyshon 2017, pp. 23–25; Srnicek 2016, pp. 34–35). In other words, the venue and system that helps surplus capital invest in platform businesses need to be in place to facilitate companies financing their business.

Second, developing the platform economy requires the online platform environment and a large number of users. The platform business is based on the online activity and resources of a large population that transcends physical location. Platform businesses provide content and services, extract user activities and resources, and create a positive network effect (Kenney and Zysman 2016, pp. 64–65; Langley and Leyshon 2017, pp. 15–17; Rosenblat 2018; Schneier 2015; Schor and Attwood-Charles 2017, p. 1; Zuboff 2019). In a way, platform companies can be viewed as taking and appropriating users' activities and resources for profit. Therefore, unless many people can easily access online services cheaply, the platform business cannot develop. Creating a large number of users requires a nationwide fast Internet network and distribution of equipment for many people's online access. At the same time, education is needed to help people use the equipment with ease. These practices are closely linked to fostering platform entrepreneurs and the labor force in that they create an online-friendly environment.

Third, platform businesses require innovative services and content that users need. To keep users on their platforms to extract their activities and resources, companies must constantly innovate in their services and content in fierce competition and develop technologies to match them (Cusumano, Gawer and Yoffie 2019; Eisenmann, Parker and Van Alstyne 2006; Rahman and Thelen 2019; Schneier 2015). A company that slows down innovation and the development of its platform will likely go extinct faster than in other industries. Companies entering the market for the first time may copy or compare themselves against the services, contents, and business methods of leading foreign companies or other companies to reduce their risks and quickly catch up.

The platform economy's development is a process of creating three elements that can be explained with three foci: (1) historical conditions, (2) government strategies, and (3) corporate strategies. First,

historical conditions are crucial because conditions for launching new businesses such as online platforms are not naturally created as technology advances (Rahman and Thelen 2019). Political and social conditions with which the economy interacts to follow a specific trajectory must be considered. If the economy is in crisis, policy resources and funds can be intensively invested in new areas such as platform business because an economic crisis means that the existing way of accumulating capital does not work; therefore, new businesses need to be focused to break through crises.

Second, government strategies are instrumental in the development of the platform economy. The government can play a pivotal role in creating markets and business environments in new economic sectors with specific purposes (Bourdieu 2005; Fligstein 2001; Polanyi 1957). For example, the government can bridge a company with surplus capital that seeks revenue. The state–finance nexus that organizes, collects, and distributes funds on a global scale is the basis of capital circulation and accumulation, and capital building and currency flow management are also linked to capital circulation (Harvey 2010, pp. 48–51). The role of government is particularly important in a society where raising capital is challenging due to insufficient development in the financial market. The government can also mobilize resources to implement and support the systems that facilitate entrepreneurship, technological innovation, and build infrastructure for the online environment.

Third, corporate strategies are crucial. Companies can create platform businesses by coordinating with government strategies and what strategies they use is a critical factor in the success of their business. The areas in which platform companies' strategies and capabilities stand out most are the production of innovative services and content and technological innovation (Cusumano, Gawer and Yoffie 2019; Eisenmann, Parker and Van Alstyne 2006; Rahman and Thelen 2019; Schneier 2015). Entrepreneurs must provide services and content to users and extract their activities and resources based on what funds and labor they have raised through fierce competition. At this time, the nature of the platform economy is largely determined by what kind of innovative services and content the companies create and how they do so.

To highlight, a society's platform economy develops when business financing, the online environment for platforms and users, and the services and content users like are created through the interplay between government and corporate strategies under certain historical and technological conditions. Through this, platform companies can generate profits by extracting user activities and resources and showing a strong tendency to monopolize driven by the network effect. However, the formation of a platform economy can inevitably cause several problems. As the government plays an important role in the process of creating markets, there is the possibility of collusion and corruption between the government and companies (Cho 2011; Kang 2004). The national strategy is implemented by intensively injecting resources over the short term, which may cause excessive duplication of investments or financial speculations and bubbles. This may result in a significant social loss (Srnicsek 2016, pp. 19–24).

The 1997 Asian financial crisis and the Korean Government's strategies to foster the platform economy

Strategies for building information and communications infrastructure

Korea started making policies on information and the communication industry in the 1980s. The military regime, which came to power through a coup in 1979–1980, faced recessions, both in Korea and worldwide. In 1979, the Korean economy recorded negative growth for the first time, and investments in both facilities and industrial production plummeted while inflation and foreign debt soared. The military regime chose the information and communications industry, which emerged as a promising industry in various advanced countries including the U.S., as a new industry on which to focus and invest resources. In 1980–1981, the military regime made a long-term plan which focused on strengthening Korea's electronic switching and semiconductor industry. Korea succeeded in developing its own technology in these two fields, which later became the basis for Internet line construction (Chosun Biz 07. 01. 2014).

Economic project in the military regime was embodied as the innovation of information and communication technology and the construction of information infrastructure. This led to a series of

developments: wireless communications in 1982 and personal computer (PC) communications³ in 1984. The public switched telephone network (PSTN) was completed nationwide in 1987 which was the result of a project led by a state-owned corporation in the early 1980s.⁴ The PSTN gave Korea one of the most advanced digitally switched networks in the world at that time. In 1987, the government started investing in building national communications networks and upgrading qualities while implementing the National Basic Information System project. In the wake of the 1988 Seoul Olympics, the government worked with *chaebols* to increase networks and advance the communication environment. In addition, the government launched information and cultural campaigns, pushing for sales of PCs around the nation and making computer training a part of their compulsory education (National Computerization Agency (NCA) 2002).

The government's focus on building information and communications infrastructure for competitiveness and growth continued into the 1990s. In 1994, the government presented globalization as a new national strategy. This was also to keep pace with *chaebols*, which had started changing their accumulation strategies in the late 1980s. Confronted by collective resistance from the workforce and intensifying business competition, *chaebols* promoted labor market flexibility, expanded the scope of capital accumulation globally, and entered the finance and distribution sectors (Kim 2018). Emphasizing competitiveness and productivity, the government argued that the Korean economy was in crisis and overcoming this would require winning the world competition through bold globalization (Globalization Committee 1998, pp. 255–57). It presented liberalization and deregulation in various sectors and labor market flexibility as solutions for Korea in fierce global competition. The government tried to further advance measures to promote the information and communication industry, challenged by U.S. and Japanese national initiatives to support information and communications in the 1990s (FKI 2011, pp. 499–505; NCA 2002). To effectively implement policies, the government reorganized offices and laws while investing intensively in building a high-speed information and communication network by designating it a national strategic project for the twenty first century (NCA 1996, p. 28).

The government and corporate efforts to build information and communication infrastructure paid off quickly (NCA 1999, pp. 443–47, 2002). First, as PCs quickly spread in large cities, the penetration rate of PCs for households grew from 11% in 1990 to 20.7% in 1994 and then 44% (8 million units) in 1998. Second, in line with the spread of PCs, PC communications has also spread around teenagers and those in their twenties in large cities. The number of paid subscribers for PC communications was about 100,000 in 1993 and the percentage of users was 3.3% of the population in 1994. By 1997, the number of paid subscribers exceeded 3 million and the percentage of users had reached 13.7.

Third, Internet users also grew rapidly. From about 138,000 in 1994, the number of users more than doubled every year, reaching 1,634,000 in 1997 and then 3,103,000 by the end of 1998. The first broadband service, which was cable modem service provided by Korea Thrunet, started in 1997. It was the start of Korea's nationwide broadband (cable modem and Digital Subscriber Line) networks. And after a few years, Korea became the most developed country in terms of broadband penetration and coverage rate among OECD countries (An 2002, p. 422; OECD 2001). The government subsidized investment in the broadband information and communication network business, lowering Internet fees, and the competition for broadband Internet networks between telecommunication companies intensified.

The intensive investment of public and private resources through concerted efforts by the government and *chaebols* to create new growth industries and profits led to the speedy establishment of information and communication infrastructure. However, the outcome was also indebted to the unique circumstances of Korea. Half the Korean population lives in the Seoul metropolitan area, and Seoul

³PC communication services used a keyboard, a modem, and telephone lines to enable users to communicate with each other via a text-based interface (Lee 2016, p. 222).

⁴National Institute of Korean History. Available at http://contents.history.go.kr/front/km/print.do?levelId=km_004_0060_0020_0010&whereStr= [Accessed 6 July 2021].

was one of the world's most densely populated cities in the 1990s. Moreover, since the mid-1990s, the majority of housing in Seoul has been apartments with a high density of residents (The Seoul Institute 2003, pp. 15, 65). In Seoul, "more than eighty percent of new apartment buildings were designed with built in fibre conduits, in preparation for what Koreans regarded as a future lifestyle: Fibre-To-The-Home." And "the fact that Korea's dense, urban population was mainly housed in Multi-Dwelling Units made the country ripe for high broadband penetration, because network installations were relatively easier and cheaper due to the increased economies of scale" (An 2002, pp. 419–20). In other words, Korean society provided an environment where infrastructure building achieved faster outcomes than in other countries.

1997 Economic crisis and fostering IT venture businesses as a solution

In 1997, the Korean economy faced a crisis: the real economic growth rate dropped below –5% and the gross domestic investment rate and the import and export rates decreased. Several *chaebols* went bankrupt, and the state had to seek a bailout from the IMF due to their inability to pay off their debts. *Chaebols* proposed an expansion of exports as a solution by launching a USD 50 billion surplus campaign (FKI 2011, pp. 592–629). While attempting to increase exports, the government announced its plan to promote the information and communications industry, which was regarded as a low-cost, high-efficiency, high-value-added industry and a strategic solution to overcome the economic crisis (NCA 2005, p. 81). Although the plan was largely similar to previous plans, the level of intensity in government investment increased and the government included IT venture businesses as a focus in their plan, noting the U.S. New Economy and Silicon Valley models. President Kim Dae-jung spoke of his vision of creating jobs and drastic economic development through venture businesses at his inauguration and emphasized the importance of competitiveness in the knowledge and information industry in his New Year's address (Office of President 1999, 2000).

The promotion of IT venture businesses was in line with the government's *chaebol* reform stance. Kim Dae-jung, who had long criticized the military regime as leader of the opposition, argued that the cause of the economic crisis was *chaebols'* lack of transparency in governance, corruption, and debt-financing practices, which gained wide support (Kim 2019, pp. 30–31). As the economic crisis severely damaged the legitimacy of *chaebols*, the government tried to intensively foster IT ventures, American-style small- and medium-sized businesses that symbolized low-cost and high-efficiency business (Small and Medium Business Administration (SMBA) 1998). Specifically, the government revised the Act on Special Measures for the Promotion of Venture Businesses and established venture business selection criteria. The selection criteria for intensively supporting venture businesses were the size of venture capital investment, the proportion of R&D expenditure, the incorporation of new technologies, and accreditation by venture company evaluation agencies. The government also encouraged college students, professors, and researchers to start ventures using promotional materials and implemented policies on stock options, deregulating entrepreneurship, and building support systems, tax exemptions and reductions for businesses, and technology development and space use in business establishments (SMBA 2000, 2003). In some ways, the government was directly involved in raising venture businesses through its policies; venture companies were no different from other new businesses except they had "venture" in their names.

The government helped venture businesses' financing in several ways. First, the government invested in venture investment associations to invest in venture businesses related to the core industries chosen by each government ministry. The government tried to utilize the function of venture capital to connect venture companies with investors and invested money to share risks with other investors to help develop the venture capital market. In 2001, the government's investments exceeded USD 200 million, and the government's share of the total venture capital market was 30% (KISDI 2002, p. 38). Second, in 1998, the government started loaning venture capital to venture-certified companies at interest rates of $\geq 2\%$, which was lower than those for other companies. The government provided support for about 8,000 venture businesses by raising about USD 1.67 billion in total over the

5-year period since 1998, including about USD 670 million in 1999 and USD 185 million in 2000. To promote venture investment, the government signed agreements with investment companies and financial institutions and ran a guarantee program for venture investment, guaranteeing a total of USD 34.2 billion in 2001 (Jang 2005, p. 33; KISDI 2002, pp. 38–39).

Third, the government promoted the Korean Securities Dealers Automated Quotations (KOSDAQ), a direct financial market that was established in 1996 to help small- and medium-sized venture companies with financing by allowing them to trade stocks that could not be listed on the stock exchange. However, due to its little recognition and high risk, the volume of transactions was insignificant. The government implemented measures such as easing the requirements for listing on KOSDAQ to help bring in funds; in fact, transactions have increased significantly since 1999 (SMBA 2003). Fourth, the government started allowing *chaebols* to invest in venture businesses in 1999, provided that they complied with the following conditions: <30% shares and not the largest shareholder. For profit and informatization, *chaebols* joined the venture capital market by establishing a startup investment company and an affiliated venture company and acquiring stocks. As a result, the supply of venture capital grew rapidly although estimating the exact rate is difficult (Song 2004, pp. 259–62).

The government also put extra effort into developing information and communication infrastructure. Announcing Cyber Korea 21 and e-Korea Vision 2006 in 1999 and 2002, respectively, the government created jobs and new growth engines through advances in digitalization. The government and corporations expedited the expansion of the wired and wireless Internet infrastructure and promoted e-commerce, while developing the Information Education Plan for 10 Million People, enabling many to engage in online activities (NCA 2002, 2005). As the penetration of PCs grew sharply with the government's One PC per Person policy, PC users exceeded 20 million by 2000, when about 33 million people in Korea were 15–64 years old. The proportion of Internet users also increased rapidly. In 1998, thanks to investments from both the government and corporations, high-speed Internet services became available and wireless Internet services began in 1999. In 2001, the number of wireless Internet users exceeded 20 million and Korea became the country with the highest level of high-speed Internet infrastructure among OECD countries in 2001. With 92.7% of households having Internet access in 2005, the penetration of the Internet was practically absolute. Meanwhile, PC communications started declining rapidly as the Internet's popularity surged and by 2001, more PC communications service companies had stopped their service (Korean Statistical Information Service (KISA) 2017; NCA 2002, 2005). As a result of infrastructure building by the government and corporations for over 10 years, many people were able to use online platforms by the late 1990s.

Venture boom and corruption scandals

The government's funding support and infrastructure building created a venture boom. The number of venture businesses grew from 2,042 in 1998 to 11,392 in 2001 and average sales surged from about USD 3.95 million to USD 11 million, of which about 30% were IT companies. The number of companies listed on the KOSDAQ increased from 331 in 1998 to 589 in 2000 and their market capitalization increased from about USD 660 million in 1998 to USD 8.3 billion in 1999 (KISDI 2002, pp. 17–18, 22). Internet platform companies have also emerged. Currently, Korea's leading platform company, Naver is a venture company created by chaebol affiliates during this period. In 2001, the size of Korea's Internet industry had grown to about USD 65 billion, which was an 8.2% increase compared to the previous year and 14.2% of Korea's GDP (KISA 2003, p. 232). However, the venture boom soon underwent a correction period. With the collapse of the Nasdaq market bubble in 2000, the market capitalization of the KOSDAQ plummeted from about USD 8.3 billion to USD 2.45 billion in that year and the growth of the listed companies also slowed. The number of venture companies had also dropped from 11,392 to 7702 by 2003 and the investment volume of government and private venture capital in 2001 fell below 1999 levels (KISDI 2002, pp. 17–18, 22; SMBA 2003).

The government strategy was focused on overcoming the crisis through economic growth and helping new companies to accumulate capital. This resulted in a rapid input of resources around 1997. As a

result, the Internet and venture businesses came to be regarded as investment vehicles that would facilitate the creation of wealth for people, and investors sometimes overlooked the risk of venture investment due to their faith in the government and venture companies (Lee 2000, p. 15; Wi 2006). At the same time, the issue of over-investing and duplication of investments was raised. While the government made intensive investments in venture business over a short period of time during the economic crisis, the competition between ministries led to excessive and redundant government investments (Song 2005, p. 279).

The synchronicity between the U.S. and Korean stock markets affected the correction of the venture boom, and the problem of the lack of a profit model for platform companies emerged in Korea, similar to the U.S. With limited information from investors, venture companies showed great interest in expanding their businesses and creating financial profits using stock prices. Ultimately, the venture boom created a fever of “get-rich-quick,” and the media was keen to introduce stories of those who made big fortunes at a stroke. Skepticism resulting from relative deprivation increased for those living on labor alone, thereby shattering the existing social norms. During this process, many people experienced failure in investment (Lee 2000, p. 18; *Sisajournal* 03.09.2000).

In addition to bubbles and the issue of over-investing and duplication, the government’s short-term large-scale funding strategy created an environment that could cause corruption, and various venture corruption scandals were revealed one after another. As the discretionary power of the officials who had the authority to allocate resources increased, companies tried to access bureaucrats or politicians and prioritized KOSDAQ listing, capital increase, and accounting gimmicks over business performance or technical innovation (Song 2005, p. 293). As a result, financial losses were borne by ordinary investors, and social loss was enlarged. Faced with venture bubbles and corruption scandals, the government admitted to the problems of the existing method and strengthened venture companies’ management and supervision. For example, the government introduced innovation capability evaluation standards to certify venture companies and strengthened the requirements for KOSDAQ listing/delisting by emphasizing ethical management while the Fair Trade Commission investigated unfair insider trading (Lee, Lim and Chung 2002, pp. 216–18). As the market underwent a process of adjustment from the early 2000s onward, only companies providing content and services favorable to people have survived and some companies such as Kakao and Naver have evolved into large platform companies through Merger and Acquisition (M&A).

Korea’s platform economy was created and developed as a result of the government’s strategy for economic growth as well as overcoming the crisis. The Korean government worked with corporations for over a decade to build the infrastructure for the platform economy by investing public resources and helping platform businesses with financing by making intensive investments for 1–2 years, presenting them with a breakthrough opportunity for the economic crisis. Although the strategy was crucial in the formation and development of the platform economy, it also caused problems, such as financial bubbles, excessive duplication of investments, and corruption scandals.

Corporate strategy to imitate PC communications business

Sufficient Internet users; insufficient content and services

Online platform businesses emerged as the government presented IT ventures as a solution to the economic crisis, aided in their financing by investing various resources, and built an environment for widespread Internet use. In fact, the first search engine in Korea was released in 1995, and Kakao, one of the leading Korean platform companies, was also founded at that time. However, in the 1997 financial crisis, Yahoo, a global search engine, started its business in Korea along with the creation of several venture businesses, thus creating an online platform ecosystem in Korea. As IT venture became a buzzword, and the Internet infrastructure began to be built, platform companies emerged. Kakao, a venture company that initially operated a website on the arts, grew rapidly after starting a free webmail service in 1997. In 1999, Kakao was reorganized into a web portal by changing its brand name. Kakao was registered on the KOSDAQ in November 1999, which was highly utilized based

on the governmental policy of the time; thus, the absence of a profit model was resolved (Hong 2001, pp. 22–24; Jung, Park and Han 2004, p. 101). In 1999, Lycos, another global search engine, also jumped into the Korean market, and Naver launched a portal service in Korea. Naver received investment from venture capital and a venture company and was able to raise funds smoothly by listing on the KOSDAQ in 2002 (Yoon and Im 2008, pp. 96–97).

However, Korean platform companies and Internet users faced a critical problem: the lack of Korean websites and web documents. Since most Koreans had a clear preference for Korean-language content, this was a very important issue. With the launch of high-speed Internet services, the number of users exploded to >10 million in 1999 but the services they could get online were extremely limited and they could not access the information they wanted. There were only 8,045 .kr domains in December 1997, increasing to 26,166 in December 1998, which remained extremely insufficient for the demand (NCA 1999). This shortage was a predictable outcome, considering how informatization and online networks were developed in Korea. They were carried out top-down via government–corporate initiatives, primarily through infrastructure building for economic growth and then in response to the economic crisis for a short period of time rather than in gradual progress from the bottom-up. While the top-down approach led to the speedy establishment of online networking infrastructure and the creation of venture businesses through intensive resource allocation, it did not offer much to cyberspace users. For the platform economy to fully work out, companies had to create innovative services and content, which are other essential elements of the platform economy.

Corporate strategy to imitate PC communications business

Korean platform companies were able to address the problems of the lack of services and content by imitating the services and user activities of PC communications service companies that were thriving in the late 1990s. In Korea, PC communications services typically provided videotex and a bulletin board system through the telephone network. PC communications grew largely among teenagers and those in their twenties in large cities, with the number of paid subscribers exceeding 100,000 in 1993; this number exceeded 3 million in 1997, representing 13.7% of the population (NCA 2002). It was around 1999 that most of the online users moved to Internet service using the commercial broadband networks (Lee 2016, p. 219). When online platform companies appeared in the late 1990s, they competed for users against big corporations that provided PC communications services for a short while, including Korea Telecom and affiliates of Samsung and SK Group. In the face of this competition, Kakao and Naver tried to bring the services provided by PC communications service companies and PC communications user activities to the Internet and advance them using superior technology. They also tried to solve their problem of lacking services and content through this strategy.

What drew many Koreans to PC communications was bulletin board-based online communities and chat rooms, where people with similar interests could communicate and share information. In fact, all the services provided by PC communications service companies were bulletin boards, chat rooms, and resources, if not more. However, young people, thirsting for new ways to communicate and build relationships, turned cyberspace into a diverse and dynamic place⁵ (Lee 2016, p. 221). Bulletin boards were created for a wide variety of topics and users exchanged and distributed information and materials.⁶ Naturally, transactions between users started appearing along with games, literature, music, language, and political activities in new and experimental forms and approaches. We can observe the birth of new digital subcultures such as amateur hackers, young software program

⁵Visit the website (<http://atdt01410.net>) created by people who remember PC communications and experience the PC communications of the 1990s. The site's first screen allows users to click on various kinds of bulletin boards, archives, and chat rooms.

⁶Cholian, a leading PC communications service company, had 280 communities as of October 1996. Online communities can be divided into thirteen categories, covering computers, culture, art, religion, humanities, hobbies, sports, regions, middle and high schools, and universities. Available at <https://www.kisdi.re.kr/kisdi/fp/kr/trend/selectResearchTable.do?cmd=selectResearchTable&langdiv=1&controlNo=95084&subjectNo=11234> [Accessed 3 October 2020].

developers, private bulletin board system operators, and online community dwellers at this time (Lee 2016, p. 221). There were just 247 online communities in 1993 but this number increased every year to 1,000 in 1996 and then 18,700 in 2000 (Yoon 2011, p. 81). PC communications service companies extracted the activities of these users and took in subscribers who paid monthly fees while selling paid content, a primitive form of the current online platform company's monetization.

By providing a "community" service similar to that of PC communications, companies are growing rapidly, and are influencing relationship building and communication among people. In 1997, Kakao adapted the paid e-mail service of PC communications business to the web, proposing a lifetime free service to users. While drawing users in by starting a "café" service, an online community service, in 1999; Naver did the same soon after. As e-mail, cafés, and chatroom services facilitated online communication and users could create new online communities, people flocked to the Internet, and online businesses that provided such online community services also increased. Online platforms which provided a service through which users could find old or current schoolmates and that helped them with activities in online communities, also gained great popularity (Digital Trend News 07. 17. 2010). According to a 2003 survey, 62% of online users had joined more than six online communities and 94% had joined more than one online community (KISA 2005, p. 109). Rather than focusing on the development and efficiency of search engines like American IT businesses, Korean online platform companies strove to make it easier for users to open and use online communities (Yoon 2011, pp. 85–87). The success of the business hinged on helping users communicate and engage in community activities with more novel ideas. While Yahoo and Lycos were significantly ahead of the search engine competition at the time, Korean companies such as Naver jumped into the search engine business after building a sufficiently large database.

The emergence of online platforms has also begun to affect the media market in Korea. PC communications service companies provided users with a place to build relationships and have two-way communication while offering news services and various types of information to gather more subscribers. In the PC communications networks, users could read news articles and get weather and stock information, exchange rates, real estate, and other basic information. Portal platforms such as Kakao and Naver also provided users with news published by media outlets and other information in various fields for free. As news gathered on portals, the media market underwent a unique and important change from the early 2000s. The main mode of Korean news consumption shifted from paper-based newspapers to portal-based outlets. Furthermore, as the influence of Kakao and Naver increased, the influence of paper-based newspapers and media companies' websites declined (Park 2018, p. 159).

News was consumed article by article on portals, and the values and norms of the media companies became irrelevant. Because loyalty to the media companies is not engendered by individual articles, these companies paid less attention to building trust (Park 2018, pp. 160–61; Van Dijck, Poell and De Waal 2018, pp. 51–52). The news rapidly changed to be more suitable for the portals. Because the media companies' revenue depends on the number of clicks on these portals, the so-called "click war" broke out. This accelerated sensationalism, fragmentation of the news (Kim 2020, p. 67; Nam and Park 2013). To increase the number of clicks, the number of articles increased rapidly. Furthermore, fact-checking and determination of an article's value were overlooked. This led to increased frequency of news production by reporters, whereas desk time was shortened (Kim 2020, p. 67).

To increase the traffic of visitors, Naver and Kakao provided free webcomics, further imitating PC communications businesses. Since 2000, these webcomics have been called "webtoons," and have since evolved into South Korea's unique platform culture (Cho 2021; Kim and Yu 2019; Park 2014, pp. 146–47) and have become important content for portals since 2003. The increase in the popularity of webtoons in Korea is due in part to the successful adaptation of comics styles to the digital environment, which features a vertical layout optimized for computers, experimentation with color and space (Cho 2021, p. 73; Kim and Yu 2019, p. 3). And webtoons have been developed by utilizing various potentials that the digital platform offers, such as open solicitation, free web distribution, active communication between readers and producers through comment and recommendation systems (Cho 2021, p. 74). Since the mid-2000s, webtoons have developed further thanks to their great popularity in South

Korea; thus, Naver and Kakao have extended webtoon services in the global market since 2014. Moreover, during this process, webtoons were commercialized to be more suitable for the platform (Cho 2021; Han 2015, pp. 138–39; Kim and Yu 2019; Park 2014, pp. 159–60). In addition, Kakao and Naver have helped e-commerce thrive since 2000 and have also sold movies, videos, music, games, and avatars (KISA 2003, p. 237).

The Korean portals were different from the usual Internet portals that are supposed to serve as just a gateway to access the Internet and navigate to other sites. Kakao and Naver provided e-mail, online community services, news, webtoons, and other content to prevent users from moving to other sites. They aggressively tried to increase their number of subscribers and visitors, the time users remained on their site, and their page views; through this, they tried to attract investments and advertisers, manage stock prices, and earn other profits. Eventually, the online platform companies either took the form of portals or were affected by portals, which made the competition more intense. In the process, Freechal and Kakao that hastily turned their free online community or e-mail services into paid services fell from grace quickly.

Rapid growth and monopoly of web portals

Web portal companies grew rapidly, leading the growth of the platform economy, and took an important position in the Korean economy. Since 2000, they have steadily expanded their business areas to include listing advertisements, e-commerce, and selling content. Mergers and acquisitions of leading web portal companies were carried out to take content from each other and combine networks, which continued until the mid-2000s. Even amid the KOSDAQ bubble and venture business corruption scandals, they showed record-high sales and the sales of the four major web portals rose from about USD 47 million in 2000 to >15 times that in the mid-2000s (KISA 2003, pp. 237–38; NCA 2005). The prime examples are Kakao and Naver, the leading Korean platform companies both then and now. Kakao's sales grew very rapidly in 1999, reaching seven times that of 1997 (Hong 2001, p. 22). Its listing on the KOSDAQ in 1999 resolved the problem of the no-profit model to some extent. As Kakao focused on shopping mall business and online content sales in response to its advertising service, which had slowed down since 2000, the company began to make profits in 2001. In 2002, it was the first online company to surpass about USD 160 million in sales. In 2003, it had >30 million subscribers and 500 million page views per day. Its operating profit was about USD 12.5 million in 2002, and about USD 29.0–31.5 million in 2003–2005 (KISA 2003, p. 237; Korea Database Promotion Center (KDPC) 2006, pp. 20–25).

Naver, which entered the market in 1999, merged with an online game company in April 2000 to make profits in the game and e-commerce sectors. In 2001, more than half of its sales came from the game business. They launched a paid listing service for the first time in the industry in 2001, which later became a cash cow, accounting for 53% of its 2007 sales. In 2002, Naver launched Knowledge iN service, which resolved the problem of a lack of content through users' collective intelligence. In a situation where Korean texts were insufficient in cyberspace, this is what interested people (Jin 2017, p. 214). In 2003, Naver started blog and online community services to increase the number of users and their "dwell time." The number of subscribers to Naver has soared since 2000, exceeding 26 million by 2004; they continued to dominate the search engine market as they started charging for paid listings per user click. Naver's sales surged from about USD 62 million in 2002 to about USD 300 million in 2005 and its operating profits also increased from about USD 25 million in 2001 to about USD 110 million in 2005 (KDPC 2006, pp. 15–20; KISA 2003, p. 308; Park, Lee and Ha 2007, pp. 107–13; Yoon and Im 2008).

Two locally based portals, Kakao and Naver, "have advanced their unique functions to compete against US-based search engines, and this means that companies like Google and Yahoo have not penetrated the Korean market to the same extent as markets in other countries" (Jin 2017, p. 214). Only a few countries, including Korea, have been able to develop their own search engines and compete with global counterparts (Jin 2017, p. 216). However, except for Naver's great success in Japan with its online messenger LINE since 2011, their businesses have failed in the global market. The

influence of global platforms has grown in Korea over time. In summary, portals rapidly imitated and innovated the business model of PC communications, familiar to Koreans in the early days. These have only been successful in Korea based on language and cultural intimacy.

The sharp growth of web portals introduced monopolies. Naver and Kakao became the standard for the Korean Internet and platform business in the early days and they absorbed all information through the network effect. Sites and platforms outside of web portals gradually served as content or service providers for web portals, increasing the influence of web portals.

This came with centralization in the web portal business. In 2003, the number of visitors to Kakao was well over 20 million, and the numbers for Naver and Yahoo were slightly less than 20 million, with the next in line having >5 million fewer visitors. In terms of the number of visits and dwell time, four companies were in a league of their own. By 2006, three Korean web portals – Naver, Kakao, and Nate – had 55% of all visitors to web portals. In 2002–2003, 72–76% of total portal sales were generated by Kakao and Naver. In 2005 and 2006, Naver made 40.9 and 44.8% of total sales, respectively, showing a clear upturn (KDPC 2006, pp. 3, 14; KISA 2004, pp. 105–06).

Naver and Kakao have become the *de facto* rulers of the online world. Most Koreans engaging in online activities during this period used these portals. It has become difficult to consider online activities without Naver and Kakao, including relationships, business, consumption, leisure, and cultural life. Moreover, they obtained the power to control the media market and change the cultural products. In addition, they have become key actors who can control the media market and change the cultural product market. In just 3 or 4 years, two companies have enjoyed great power in the economy, politics, and civil society.

Conclusion

Noting the growing importance of online platforms, this paper discussed the history and characteristics of the development of the platform economy in Korea, defining platforms as a business model and arguing that the platform economy requires financing, an environment for Internet use and users, services, and content. Many believe that the platform economy's development is a natural outcome of technical innovation. However, the platform economy was created by the interplay of government and corporate strategies under certain historical conditions. In Korea, the platform economy developed after the 1997 Asian financial crisis as a result of the interplay between the government's strategies to counter the crisis and the business strategies of emerging platform companies. Presenting the IT industry and venture businesses as a solution to the economic crisis, the government helped finance venture companies through intensive investment. The government also enhanced the strategy of building information and communication infrastructure that had been implemented since the 1980s to ensure fast, easy access to the Internet for many people. However, this strategy also created venture bubbles, over-investment, and investment duplication, and then corruption scandals regarding ties between public officials and corporations.

Platform companies such as Kakao and Naver, which initially took the form of venture businesses, suffered from the lack of content and services to provide; however, they quickly built web portal platforms by copying and benchmarking PC communications services. In the late 1990s and early 2000s, Kakao and Naver were able to grow rapidly by attracting users and providing free e-mails, online community services, and news and webtoons from various media, which encouraged users to stay with the portals for a long time. In the early days, the unique properties of the platform economy in South Korea were largely formed by portals actively adapting PC communications services. Consequently, they could survive competition with global platform companies. Kakao and Naver became dominant in the Korean online market, and they had a profound impact on people's business, consumption, leisure, and cultural activities, in addition to the media market.

Korea's experience suggests that the rise and development of the platform economy needs explanations that consider the following. First, it is important to consider the economic crisis management and social conditions. As in the case of the platform economy in the U.S., the platform economy in Korea emerged in response to the economic crisis faced by the government and corporations.

When conventional approaches to accumulating capital do not work well, we should focus on what alternatives the government and corporations would choose. This is linked to economic development, the progress of informatization, and openness. The topography, population density, and housing type of a society can also play a major role in building infrastructure such as the Internet. The quick spread of the Internet in Korea was enabled by the centralization of the metropolitan area and apartment-oriented housing. A decentralized society requires significant time in infrastructure construction, in the cases of low population density, varied housing types.

Second, it is necessary to consider the extent and speed of state intervention and its unintended consequences. The importance of the government in managing the economy cannot be overemphasized. The government can play a pivotal role in creating and fostering new economies such as online platforms; Korea presents an extreme example. The Korean government worked with corporations for over a decade to build the infrastructure for the platform economy by investing public resources and helping platform businesses with financing by making intensive investments for 1–2 years, presenting them with a breakthrough opportunity for the economic crisis. However, this extreme approach was highly likely to cause speculation, bubbles, and economic collusion in the financial market. While the government played a crucial role in shaping the platform economy, the approaches, aim, extent, and unintended consequences of its intervention must be considered.

Third, corporate strategies and the possibility of the emergence of local online platforms should be considered. All platform businesses provide services and content favored by users and generate revenue by appropriating users' activities and resources. What matters here is the services and content that companies provide and use to generate revenue under certain historical conditions. In Korea, venture businesses that provided services focused on web portals by copying PC communications services grew quickly and led the platform economy, some of which still leads the Korean economy. In the early days, they created business models that fit the Korean market and survived competition against global companies despite being latecomers. Depending on the strategies of platform companies in each society, platforms tailored to their society can grow to create a unique platform economy or become absorbed into the global platform economy.

Fourth, what political parties and governments should consider in the formative stage of the platform economy are how laws and regulatory agencies can respond to the online market domination of a small number of companies, or the expansion of those companies across multiple economic sectors. Despite any resulting form of the platform economy, it should also be considered that the platform economy could be a starting point for a handful of companies to dominate the online market and significantly direct people's activities in a direction that is in line with their business. The government and political parties in Korea have shown interest in the rapid growth of online platforms and the corresponding market, striving to not fall behind the global competition. In the absence of related laws and regulatory agencies, online platform companies have become another *chaebols*, earn profit based on their dominant status in the online market and through the absolute power of the business owners. These businesses have greatly diversified in the 20 years since their establishment. There is a growing criticism of the effects of web portals on the media market. However, it has become difficult to regulate powerful companies, such as the *chaebols* in Korea. The formative stage of the online platform economy is considered to be the period when the appropriate regulations and taxation systems for online platform companies are prepared.

Financial support. This work was supported by the Ministry of Education of the Republic of Korea and the National Research Foundation of Korea (NRF-2020S1A5B5A17087549).

Conflict of interest. None.

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