Cyber Space and Digital Democracy in South Korea

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Abstract. Korea is a very interesting case. Korea shows rapid growth of the Internet users, and larger trade surplus in telecommunication industry with the help of government's successful information technology policy. And Koreans also made their country more democratic with active participation. This paper analyzed the growth of the Internet and SNS in South Korea. The Internet and SNS created cyber space. They have several advantages as an effective means of communication. Cyber space is influenced by three subjects such as the government [state], the market [capital], and citizens [people]. There are two research questions. First question is how the Korean CMC industry can grow fast after its birth. Three main subjects were dealt with in this research. They are the State, the Market, and the Citizen. I divided the history of Korean CMC industry into three periods. The first formation stage is from the birth of CMC in Korea between from 1980 and 1990. The government initiated the monopolistic CMC market. Several conglomerates participated to co-operate the government. But the users are very small. The second growth stage is between from 1990 to 1995. The government also deregulated the Market with changing policy from 'appointment' to 'registration'. The companies increased investment for the possibility of wide diffusion of CMC use. The third prosperity stage is between 1995 and 2010. The government promoted the CMC market's competition with 'notice' policy. And citizens actively enjoy and apply CMC services. However, the fourth shift stage to smartphone faced several problems such as less democracy and one way communication which will weaken the creativity of the content. Second question is what the roles of three subjects are. I examined the cyber space by the uses of digital media with three subjects. Even though the state and the market have limited to promote democracy, the citizens are expected to make the digital society more democratic. If the state tries to monitor citizen by the use of digital media, that society is called ‘surveillance society’. As the government is open and transparent, the citizens’ democracy will increase. The market should limit to gather and accumulate people’s information and profile for protecting their privacy. Cyber space is a public sphere, which is two-way, economic, and open to every people. It has various positive sides. It promotes the communication by people of political information and opinion freely and actively. It makes people form groups against the wrong-doing of big companies and keeps people’s privileges. People buy goods more cheaply via e-commerce, which also helps companies lessen the expenses. However, the cyber space has several negative sides, too. The government and companies can accumulate people’s information and use it for diverse purposes. If the government uses that information to monitor and control people, such a society may become a ‘surveillance society’ threatening democracy as in George Orwell’s ‘1984’. As companies also take advantage of big data to sell more products for their profit increase, so people often feel they are captivated by a lot of commercial messages, including much advertising spam mail. The more civil society depends on the cyber space, the more it can become fragile and risky. The digital media guarantees neither democracy nor a surveillance society. It’s true that new technology gives us the opportunity to expand democracy. However, if we don’t use new media rightly and positively, we may find it negative or even harmless.
Therefore, the positive use of the digital media and keeping our cyber space democratic is very important. With democracy, the Internet and SNS industry can be flourished by the cooperation of netizens, business managers, IT researchers, and politicians.

1. Introduction

We live both in the cyber space and in the digital society. The cyber space is evolving by digital media such as Internet and social media. Digital media produce and disseminate huge information all over the society at high speed. People can interact and form a community on the website. Many researchers observe these sides and predict that digital media will make the present digital society more democratic.

Internet as a digital media has a long history in the U.S.A, which started ARPANET, predecessor of Internet, in 1969, and public access began in 1992. Compared to U.S.A, Korea has a relatively short history of Internet. Korea began to connect the global network in 1982 and opened it officially in 1994. Concretely, the computer and communications industry, which includes telephones, mobile communication and the Internet, has made rapid progress. In South Korea, the ratio of people over 6 years old who use the Internet e-mail is 61.9 percent in 2015 (http://stat.kisdi.re.kr/). And the SNS (Social Network Service, Social Media is regarded as same) usage rate is 43.1 percent (http://stat.kisdi.re.kr/). These users have been re-born as ‘netizen (network + citizen)’ by the advancement of information technology (IT). They play a greater role in Korean digital society, for example, by forming public opinions on the net, promoting the IT industry with early adoption of new telecommunication media, and creating a lot of digital cultural content in cyber space. Netizens have become a symbol of the present Korean digital society.

Several media has praised the growth of Korea in IT industry. The New York Times glorified Korea as the realization of “America’s broadband dream” (Belson & Richtel, 2003). Paul Wolfowitz who is the former president of the World Bank and a well-known neo-conservative, described South Korea as a “world IT leader” in 2006. The Korean government has succeeded in getting high praise from the outside world, and has persuaded other countries that pervasive broadband, actively subsidized by the government, will increase industrial efficiency, create e-businesses and jobs, improve global competitiveness, and increase household income (Kwang-suk Lee, 2011).

In the information age, people are using the Internet and SNS as a main communication media. They create a public sphere, by the use of Internet and SNS, which are fast, correct, two-way interactive, economic, and digital multi-media. The Internet and SNS have various positive sides. They promote the communication by people of political information and opinion freely and actively. They make people form groups against the wrong-doing of big companies or governments, and keep people’s privileges. People buy goods more cheaply via e-commerce, which also helps companies lessen the expenses and heightens the competitive power.

However, the Internet and SNS have several negative sides, too. The government and companies can accumulate people's information and use it for diverse purposes. If the government uses that information to monitor and control people, such a society may become a 'surveillance society' threatening democracy as in George Orwell's ‘1984’. As companies also use that information to sell products, so people often feel they are captivated by a lot of commercial messages, including much spam-mail. The more society depends on the Internet, the more it can become fragile and risky.

The digital media guarantees neither democracy nor a surveillance society. It's true that new technology gives us the opportunity to expand democracy. However, if we don't use new media properly, we may find it useless or even harmless. Therefore, the positive use of the digital media and keeping our society democratic is very important.

In this paper, I will first study the basic subjects that influence the appearance of the digital society in South Korea. I selected three subjects outside the Internet and SNS to examine: the government (state), the market (capital), and users (citizens). These were continuously examined in my previous analyses to the Korean computer-mediated communication (CMC media) industry (Lee J, 2005; 2011). I will argue for the citizen to promote democracy in the digital society.
Research methods for two research problems are literature review, case analysis, and a political-economic approach. My assertion and theory will be supported by several cases, which were reported as social issues in South Korean media.

2. Research Question and Theoretical Framework

2.1. Research Question and Terminologies
On the basis of this fundamental idea, the following two questions are raised to study the role of citizen and digital media in the knowledge-based society.

First, how can the Korean Internet and SNS (CMC media) industry grow after its birth?

Second, what is the role of three subjects in the digital society?

I will use the following terminology. First, I define “computer-mediated communication (CMC)” as humans’ producing and sharing information with others by the use of computers and communication. In other words, CMC means the activity of the Internet and SNS or communication over the Internet and SNS. Its broad meaning includes mobile telecommunications and all other phenomena related to computer-communication. Its narrow meaning is restricted to the cyber space which is comprised of the Internet and SNS.

Second, I define “subject” as a main agent of society influencing the decision of how to initiate, invest, and adopt the Internet and SNS (CMC). Three subjects addressed in this paper are ‘the state’, ‘the market’, and ‘citizens’. Besides these, other subjects participate in operating and developing CMC. Nonetheless, I will focus on these three main subjects to clarify the interactions of these subjects. The role of digital media is primarily decided by these main subjects.

Third, “digital media” is defined as electronic media that work on digital codes. As to Wikipedia (http://en.wikipedia.org/wiki/Digital_media) digital media like digital audio, digital video and other digital "content" can be created, referred to and distributed via digital information processing machines.

Fourth, “role” is defined as an expected behavior or function in a given society.

Fifth, “digital society” is defined as a society which depends on digital technology and information of which major product and raw material is

2.2. Research Method
I tried to answer the questions through a political-economic approach. The political-economic approach has been regarded as scientific, systematic, and critical research method to capitalistic society. Its basic logic is that mass media has been looked upon as an economical and ideological substance. It helps us to understand the structural peculiarities. It accounts for not only the effects, but also the causes of digital society.

There are also doubts whether it can be applied to the study of information society. It is plausible that a changing society demands a change of research approach. Nevertheless, we cannot delay doing research until that change of approach occurs. Still, we can find or create a new persuasive approach by applying and appraising a political-economic approach to the on-going phenomena of the Internet and SNS (CMC). Garnham (1990) emphasized that the development of a new means of communication is the result of changes in the system of capitalism.

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1 You can see further discussion of the political-economic approach in Vincent Mosco (1989; 1996) and McChesney (1998; 1999).
The rise and expansion of digital society depends on several elements - the state, the market (e.g. conglomerates, companies, and capital interests), citizens (e.g. netizen, Internet users, and people) and so on. Yve de la Haye (1979) called this phenomenon the dynamic "State-Capital-Social Movements" in which the triangle of forces and their articulation conditions the communication sector. McChesney (1998) explains that the political economy of communication entails two main dimensions; the nature of the relationship of media and communication systems to the broader structure of society, and the influence of ownership, support mechanism (e.g. advertising), and government policies to media behavior and content. Therefore, I will analyze the digital society by focusing its relationship to ‘the state’, ‘the market’, and ‘citizens’.

2.3. Views of Information and the Internet

The Citizen who are Internet users, form the digital society for better sharing of useful information. Above all, we should look closely at the nature of information and the Internet from several viewpoints. Four viewpoints which are reviewed here are 1) the economical view of information, 2) the e-business view of information, 3) the futurist view of information, 4) the communication view of information and 5) the Panopticon view of information.

First, the economic view of information explains its cost and price, consumption, the role of technology, etc. We can find a technological initiative of information economy from Gordon Moore (1965). He had an insight to key points of information technology. Moore’s law of processors is the processing capacity of chips doubles every 18 months. After observing an exponential growth in the number of transistors per integrated circuit, Moore predicted that this trend would continue (Moore, 1965). George Gilder (2000) also supports the powerful influence of information technology. Gilder’s law of bandwidth is that available bandwidth doubles every six months. Gilder also said that communications bandwidth is not only the secret of electronic progress, but also the heart of economic growing, and that this will give the masses of people unprecedented hope over industrial revolution (Gilder, 2000)
Shapiro and Varian (1999, 3) said that information is essentially anything that can be digitized-encoded as a stream of bits, and added that information is costly to create and assemble but cheap to reproduce.

“Economists say that production of information good involves high fixed costs but low marginal costs. The cost of producing the first copy of information good may be substantial, but the cost of producing (or reproducing) additional copies is negligible. This sort of cost structure has many important implications. For example, cost based pricing just doesn’t work: a 10 or 20 percent markup on unit cost makes no sense when unit cost is zero. You must price your information goods according to consumer value, not according to your production costs.”

Information became at once a main source of production and a valuable commodity for consumption. Information consumers react to information producers by copying information. Consumers also value information by experiencing it. “Nowadays the problem is not information access, but information overload” (Shapiro and Varian, 6). So it is very important that users know well how to locate, filter, and communicate what is useful to them. The information economy and society is driven by information technology and “infrastructure that makes it possible to store, search, retrieve, copy, filter, manipulate, view, transmit, and receive information” (Shapiro and Varian, 8). From this viewpoint, we assume that to live in an information society, information plays a key role in economy.

Second, the e-business view of information explains that the Internet, the combination of computer and communication, doubles its usefulness with every new user (Gerbert et al., 2001). This is called Holmes’ law\(^2\), and it clarifies why the Internet is a superior collaborative tool. Holmes’ law demonstrates that grows much faster than indicated by the commonly quoted ‘Metcalfe law’ for one to one communication (Gerbert et al., 2001).

Metcalfe’s law, named after Bob Metcalfe, states that ten-fold increase in the size of a network leads to a hundredfold increase in its value. When there are \(n\) people in a network, and the value of the network to each of them is proportional to the number of other users, the total value of the network to all the users is proportional to \(n(n - 1) = n^2 - n\) (Shapiro and Varian, 1999\(^3\)). In other words, this law counts the number of one-to-one connections, i.e. the number of subsets with two members. This number is \(N(N-1)/2\), or \(N^2/2 - N/2\), so it is referred as “growth with \(N^2\)” (Gerbert et al., 2001).

However, Holmes’ law counts the number of many-to-many connections, i.e. the number of subsets with an arbitrary number (bigger than one) of members. This number is \(2^n - (N+1)\), so it is referred as “growth with \(2^n\)”. If \(n\) is 100, then the value in Holmes’ law is about ten to the power of thirty, but the value in Metcalfe’s law is ten to the power of four. Therefore Holmes’ law produces more value than Metcalfe’s law.

These effects arise from ‘network externalities’. The network begins from product, but gains power through users. A sufficient size of a network provides the network manager a consecutive market. A network is like a standard. If we adopt a certain standard, then we should buy products related to that standard. Externalities, like feedback, make a network bigger and better, and benefit members more (Shapiro and Varian, 1999).

These rules mean that information technology has the possibility to produce extraordinary value by networking people for the purpose of communicating information. From these laws, the Internet, which is network of networks, creates enormous value because it is the worldwide network itself.

Third, the futurist view of information explains that growing information changes society. Daniel Bell (1973), Alvin Toffler (1980), and others think that a few developed countries have moved from being industrial economies and societies to becoming information economies and societies. After

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\(^2\) They (Gerbert et al., 2001, 44) stressed that “Holmes’ Law” is not a “law”, but merely a convenient shorthand for the tremendous opportunity that lies in making many-to-many interactions work.

\(^3\) Shapiro and Varian (1999, 184) says that if the value of a network to a single user is $1 for each other user on the network, then a network of size 10 has a total value of roughly $100, in contrast, a network of size 100 has a total value of roughly $10,000. Metcalfe told Shapiro and Varian that this law owed George Gilder a lot.
Daniel Bell (1973) focused on how the advanced economies were shifting from being based on the production of goods to a service and information processing basis, others focused more specifically on the central role of information as compared to other services - where wealth and economic activity are created, what grows most, and where most people are employed (Straubhaar & LaRose, 1997, 58).

Daniel Bell (1973) says that manipulation of information makes us a “post-industrial” society, an information society. In an information society, more people are employed in various information media, and communication industries. Futurists, such as Bell (1973), think computers and information technology contribute to economic development, thus extending productivity growth. They also see that technology will provide the effective instruments to manage social conflict in a manner not possible under industrial capitalism (Bell, 1973).

Computer communications systems are expected to advance economy and politics by allowing higher productivity and widespread political participation (Toffler, 1980). As the information technology develops, the source of power is also shifted from money [capital] to information [knowledge] (Toffler, 1991).

Futurists are optimistic about the development of technology, because they see it transforming society through the advancement of information society. They believe that computers and communication advance economic welfare and political democracy, which are limited to relatively fewer, powerful elites in capitalist society.

Fourth, the communication view of information explains that the Internet, a global network of computer networks, is an emerging mass media, with especially diverse expression modes. Anyone who is connected on-line is able to send e-mail, chat with others at the same time, and search for data anytime, anywhere. The Internet and SNS (CMC) as a new media are distinguished from the old media by five qualities; packet-switching, multimedia, interactivity, synchronicity, and hypertextuality (Newhagen & Rafaeli, 1996).

These five unique qualities make the Internet and SNS more competitive new media. First, packet-switching makes transmission and reception of mass information technologically safe and fast. It sends messages via packets of information and receives them by reassembling them for safe and fast transmission. Second, multimedia empowers the Internet to present rich contents. The Internet and SNS (CMC) facilitate diverse forms of text, sound, images and animation. Third, interactivity attracts more users to the Internet, because it meets the user’s presenting desire. Feedback by interaction makes the user of the Internet not a passive object but an active subject. Fourth, synchronicity is one of main reasons Internet users feel the liveliness of communication. When users interact with partners in real time with Internet Relay Chat (IRC⁴), their synchronous feedback overcomes the barrier of distance. It does not exclude asynchronicity when their exchange of messages involves lag time. Fifth and finally, hypertextuality gives us customized information. Users have more ability to choose information that they want to acquire. This nonsequential message processing allows both traditional linear reading and multi-linear reading. These five characteristics of CMC make the Internet superior to other traditional modes of communication.

Five common forms of CMC are electronic mail (e-mail), bulletin board system (BBS), IRC, multi-user domains (MUDs), and the World Wide Web (Wood and Smith, 2001). The Internet and SNS also provide a virtual reality, a technology that gives users a realistic, three-dimensional, interactive experience. Virtual means “not in fact”; reality means “in fact”, and virtual reality then means not-in-fact fact (Dominick 1996). Therefore the Internet and SNS which are convenient, cheap, effective, and interactive media, become the dominant media over newspapers or television.

This view of communication researchers tries to understand the inherent functions of the Internet and SNS, and to apply them to social life for a better society. They also believe that new media may

⁴ IRC is like a real conversation. Chatting room and messenger service make participators to send and receive opinions and information in response to their feelings, judgments, and positions. It substitutes real conversation by the advantages of less expenditure, faster facing, and overcoming far distance.
lead to a new society. McLuhan (1966) distinguished societies, and welcomed the electronic age with television before the Internet began to appear in 1969.

Fifth, the Panopticon view of information explains that the Internet and information system can be used as a tool of controlling people. This concept was designed as a model prison by Jeremy Bentham (1787). The Panopticon which means that all can see, functioned as a round-the-clock surveillance system. The design of Panopticon made it possible that no prisoner could ever see the 'inspector' who conducted surveillance from the privileged central location within the radial configuration. The prisoner could never know when he was being surveilled. Therefore, such system with prison’s mental uncertainty could be a crucial instrument of discipline.

Michel Foucault (1975, 195-228) developed this concept for described the implications of surveillance society.

"Hence the major effect of the Panopticon: to induce in the inmate a state of conscious and permanent visibility that assures the automatic functioning of power. So to arrange things that the surveillance is permanent in its effects, even if it is discontinuous in its action; that the perfection of power should tend to render its actual exercise unnecessary; that this architectural apparatus should be a machine for creating and sustaining a power relation independent of the person who exercises it; in short, that the inmates should be caught up in a power situation of which they are themselves the bearers. To achieve this, it is at once too much and too little that the prisoner should be constantly observed by an inspector: too little, for what matters is that he knows himself to be observed; too much, because he has no need in fact of being so. In view of this, Bentham laid down the principle that power should be visible and unverifiable. Visible: the inmate will constantly have before his eyes the tall outline of the central tower from which he is spied upon. Unverifiable: the inmate must never know whether he is being looked at any one moment; but he must be sure that he may always be so. In order to make the presence or absence of the inspector unverifiable, so that the prisoners, in their cells, cannot even see a shadow, Bentham envisaged not only venetian blinds on the windows of the central observation hall, but, on the inside, partitions that intersected the hall at right angles and, in order to pass from one quarter to the other, not doors but zigzag openings; for the slightest noise, a gleam of light, a brightness in a half-opened door would betray the presence of the guardian. The Panopticon is a machine for dissociating the see/being seen dyad: in the peripheric ring, one is totally seen, without ever seeing; in the central tower, one sees everything without ever being seen."

Panopticon is no more a concept in the digital information age. Considering it as a big data system of monitoring and documentation in database, we live in the Panopticon society.

3. The Subjects of CMC Development and the digital society in Korea

3.1. History of the Korean CMC Industry as the Digital Media Industry

Since the establishment of the first Korean CMC Company, Dacom, in 1982, several other companies, including Korean PC Communication (1992), Nowcom (1994) and Samsung SDS (1996), have followed. In this early phase, the service type of CMC was different from that of the Internet because of the underdevelopment of information technology. In spite of the short history of the Korean CMC industry, it expanded rapidly with CMC service users, amounting to 578 thousand people in 1994. By the way, in that same year, Internet services were officially introduced by the Kornet of Korea Telecommunication (KT). In the beginning of Internet services in Korea, only a limited number of domestic CMC users could contact the Internet. Then, as domestic CMC services allowed their users to connect freely to the Internet, the number of Internet users became similar to that of the CMC. However, after most of the domestic CMC users connected to the Internet, the relationship between domestic CMC and Internet use reversed. The increase of Internet users didn’t depend upon domestic CMC companies anymore. People were able to use Internet services without subscription to domestic CMC service. Two portal services, Naver and Daum, have been survived after severe competition

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5 This analysis was based on the writer’s thesis (Lee J., 1997; 1999, 2005) and partly revised.
since 1998. They succeeded to gather a lot of subscribers and launched SNS later. People chose the Internet instead of domestic primitive CMC service. Domestic CMC services began to show slower growth, to recede and be transformed into portal sites of the Internet. Therefore, CMC service is now equivalent to the Internet and SNS.

The developing trend shown in Table 1, Table 2, and Table 3 illustrates that CMC became one of the major communication phenomena in Korea. The number of smartphone users in Korea has exceeded 20 million on November 1st 2011. In other words four out of 10 Koreans and eight out of 10 economically active persons in Korea are currently using one of these electronic gadgets. It took just 2 years since the first smartphone first introduced in the Korean market in November 2009. The recent data shows that smartphone users are 60,559 thousand in August, 2016 more than all the population.

### Table 1. Increase of Internet Users in South Korea

| Year | 1994 | 1996 | 1998 | 2000 | 2004 | 2010 | 2015 |
|------|------|------|------|------|------|------|------|
| Users* | 138  | 731  | 3,103 | 19,040 | 30,670 | 37,010 | 41,940 |

* The unit of users over three years old is one thousand persons. Source: National Computerization Agency (NCA), 2004-2010 and Korea Internet and Security Agency (KISA, http://isis.kisa.or.kr/), 2015; The rate of Korean Internet users in 2015 is 85.1%.

### Table 2. High Speed Internet Subscribers in South Korea

| Year | 1999 | 2000 | 2001 | 2004 | 2010 | 2015 |
|------|------|------|------|------|------|------|
| Subscribers | 266  | 3,939 | 7.763 | 11,921 | 17,219 | 20,400 |
| Family Ratio | 1.9  | 27.4 | 52.3 | 76.6 | 100.4 | 97.1 |

* The unit of users is one thousand households. Source: MIC, * Estimated total households of Korea for 2004, 2011, and 2015 are 14,311, 17,152, and 21,011 thousand. Family ratio is the rate of family using high speed Internet service including cable modem.

### Table 3. SNS usage rate over 6 years old in South Korea

| Year | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|------|------|------|------|------|------|------|
| Ratio | 67.1 | 66.5 | 67.1 | 55.1 | 60.7 | 64.9 |

* Out of the Internet users ages 6+, 64.9% have used SNS (Social Networking Service) in the last 1 year, while 46.1% access SNS 'In the last 1 week'. SNS strengthens personal relationships with acquaintances or creates new social networks to broaden one’s network of relationships, includes Minihompy (small homepage), Blog, Twitter, Kakao Story, Facebook, and Google+. Source: KISA, http://isis.kisa.or.kr/

To examine the economic characteristics of the Korean CMC Industry, this study divides its history from 1982 to 2016 into four periods on the basis of the telecommunication policy of the government, the competition situation of the market, and citizens’ using CMC services. I also tried to identify what subjects influenced the development of CMC. The first period is the formation stage or monopoly period (1982-1990). The second is the growth stage or oligopoly period (1990-1995), the third is the prosperity stage or domestic competition period (1995-2010), and the fourth is shift stage or global competition period (2011-2016).
In the first stage, the state played a large role by initiating the foundation of Dacom, supporting its management by creating a large government demand, and deregulating data communication institutions. President Chun Doowhan (1980-1988) agreed to this plan which a computer manager proposed in 1980 for economic accomplishment. A public enterprise, Korea Telecommunication which held 33.4% of the shares, and various private enterprises jointly founded the Dacom Company. Dacom was the first company authorized as a value added network (VAN)\(^6\) enterprise dealing with data communication.

There were four deregulation policies implemented in the 1980's. The first deregulation, in 1985, introduced the approval system, where a person or corporation could offer data search and treatment services. The second deregulation, in 1987, expanded services from the company subscribers to the leased lines for general use. The third deregulation, in 1988, permitted medium and small-scale companies to build computer networks and national infra computer network enterprises. Lastly, the fourth deregulation, in 1989, expanded the scope of the multiplexes.

The government intended to promote industrial development by enhancing the Korean CMC Industry, which was predicted to greatly affect the electronic industry and other industries. To this purpose, the government also tried to increase the effectiveness of the administration by computerization and implementation of a network system.\(^7\) When the government becomes streamlined and effective, then it possibly gives hegemony (leadership) to the market (capital) and citizens.

In the second stage, the market was a major subject in that Korean conglomerates actively participated in the CMC service market to achieve a rapid expansion of capital and make a good profit. As the government transformed the monopolistic market with Dacom to a competitive market with multiple enterprises because many advanced countries were expected to invest on a large scale in the information and communication industry, the public enterprise Korea Telecommunication and several conglomerates companies were concerned with the various effects of participation in the CMC industry.

In the third stage, citizens also became a main subject by using Internet services actively. After the ‘notice policy’ of the government in 1995, venture capital increased, investing a lot of Internet venture companies in free communication market. A more competitive communication market made citizens as consumers more powerful. Citizens had more opportunities and means to address the wrong doings of the state and the market. Citizens’ subscribing to mobile telecommunication, one of broader CMCs, was also rapidly increasing. Also, citizens armed with two CMCs, nourished political power to affect the election of parliamentary members in 2000, and the president of the Korean government in 2002.

The citizen’s rise and the capital’s enduring power do not imply the state’s weakening. The state also succeeds to keep its role, developing CMC industry and educating computer illiterate. The accomplishments of CMC policy verify effectiveness of government administration. The information and communication minister Daeje Chin (2004) emphasized an advance in information technology (IT) field including CMC.

“As of the end of 2003, 11.18 million households – more than 73% of the total number of households – subscribed to broadband Internet and 29.22 million people – 66% of total population – had access to the Internet. According to the ‘ITU 2003 Internet Reporter,’ Korea ranks first in terms of broadband Internet penetration rate, has the third largest population of Internet users, and has the fourth highest PC penetration rate in the world. These statistics will illustrate Korea’s firm standing as a leading Internet country.”

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\(^6\) VAN (Value added network) enterprises in Korea are called enhanced services in the U.S.A. and VADS (Value added data service) in the U.K.

\(^7\) The subsequent government has reinforced this view. The following is offered from the ministry of information and communication (MIC).

"Informatization" is the core national strategy for such environments and it is an important tool for removing social inefficiencies and enhancing productivity and transparency of a society. The IT industry, the supply base for informatization, leads the growth of a knowledge-based economy through creating value-added, new business opportunities and jobs. (http://www.mic.go.kr/english/, 1999)
Telecommunication industry, CMC industry related, of Korea posted the biggest trade surplus, $13 billion in 2003 among member countries of the OECD. Korea also exported $154.0 billion worth of IT goods and posted an IT-related trade surplus of $78.2 billion in 2010. These statistics are compliments to both the government and the market. The conglomerates including Samsung Electronics co, and LG Electronics Inc., got enormous profits and reinforce their power to the government and citizens.

In the fourth stage, the CMC industry has some difficulty in the field of both hardware and software. In the hardware, smartphone became a main media for the use of the Internet and SNS. Samsung Electronics has achieved a very large profit in the smartphone market. But the future promise is not bright, because technical problems of hard ware may weaken the brand power. In the soft ware, as smartphone adopted new types of services such as social media, SNS services expanded their market. For the CMC industry to keep growing continuously, workers and users need free and creative working condition. However, bureaucratic, less democratic government and short-term profit seeking big companies in South Korea demanded CMC workers follow managers’ guidelines for the past ten years (2008-2017). These strict organizational environment prevented interactive communication. Less communication leads bigger fails by smaller mistakes. If any country, including South Korea, would not advance democracy and improve two-way, interactive, open, equal communication, further development of CMC industry cannot be expected any more.

3.2. The role of CMC industry as Digital Media
With CMC, since the 1990s there have been three characteristics: ‘information hegemony’ of the state, ‘information economy’ of the market (capital) and the ‘information democracy’ of citizens in Korea. These findings give us a new evaluation of the roles of Korean CMC industry.

![Diagram of CMC Industry Characteristics](image)

**Figure 2. The Characteristics of Korean CMC Industry**

* Korean CMC industry’s characteristics = State (information hegemony) + Capital (information economy) + Citizens (information democracy)

First, each different subject that influences the development of the Korean CMC industry at each phase shows that the social adoption of CMC in Korea is dynamic and changeable according to the social conditions. Secondly, three interests - the state's information hegemony, capital's information economy and a citizens' information democracy - access CMC actively each out of its own necessity. In addition, these characteristics of Korean CMC industry are also changeable due to cooperating and

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8 In 2003, South Korea’s surplus in telecommunication equipment was $13 billion, followed by Mexico’s $11 billion and Finland’s $7.2 billion, Japan’s $6.6 billion, and Britain’s $5.5 billion. www.korea.net
conflicting relationships between these subjects. Lastly, the subject that the roles of each subject have
two sides, both positive and negative, means that a more prudent, harmonious, and democratic Internet
and SNS policy is needed.

Shortly, Korean CMC industry has grown a lot in the 1990s. Three points are drawn as main causes
of this growth. First, the government had a political consensus to a development of CMC and fully
supported it. The government regarded CMC as a key leading industry and encouraged the market to
invest it. Second, the conglomerates such as big company groups searched for a promising industry to
create demand largely, and they saw CMC as a good alternative. In particular, they had large
infrastructures in IT industry, so they could launch and expand CMC industry easily. Third, many new
creative researchers join the IT industry, and they contributed the growth of CMC industry. Lastly and
fourth, citizens eagerly need new media to serve their own interests, and they found it not in traditional
newspapers or televisions, but in CMC. We should observe that the 1990s of Korea is transition period
from authoritative underdeveloped society to democratic developing society. Such period is on the one
hand unstable, on the other hand dynamic. Citizens need more information about political and
economic situations. Furthermore, the government toward democratization, gave citizens more
freedom of expression, and allowed CMC to flow diverse information. Therefore, these four causes
made Korean CMC industry rapidly growing.

4. The Role of Citizen in the Digital Society
The digital society appeared and expanded by needs of three subjects to the digital media by the help
of information and communication technology (ICT). The state tried to administrate effectively by
using the digital media actively. The digital media made it easy for the government to accumulate
peoples’ private information en masse and to manage them. Such society is fragile to the threat of
wrong leaders who want to be authoritarians. But it is very difficult to draw a fine line between
effective administration and privacy deprivation.

The market tried to get more profit by using the digital media actively, too. The digital media made
it easy for the market to accumulate consumers’ private information en masse and to sell them goods
and services. In that society citizens are often treated as not subjects or objects of economy but means
for capital’s profit. If the market weighs only profit, then the digital media is no more than a
surveillance tool captivating citizens.

Citizens also tried to get more information by using digital media actively. The digital media made
it easy for citizens to keep the government clean and productive. If the market sells bad products, then
they can form a group, demonstrate or demand to correct its faults. But citizens’ resistance is relatively
restricted because it depends on the condition that the level of surveillance by the state and the market
to citizens is low.

Korea may be called the digital society in the information age that most population uses the
Internet and SNS via broadband or mobile phone\(^9\). It is not unusual that the Internet and SNS often
appear as the social issues.

5. Conclusion and Implication
Korea is a very interesting case. Korea shows rapid growth of the Internet users, and larger trade
surplus in telecommunication industry with the help of government's successful information
technology policy. And Koreans also made their country more democratic with active participation.

This paper analyzed the growth of the Internet and SNS in South Korea. The Internet and SNS
created cyber space as a public sphere. They have several advantages as an effective means of
communication. Cyber space is influenced by three subjects such as the government [state], the market
[capital], and citizens [people].

\(^9\) Information society can be differently named by several researchers; ‘network society’ (Jan Van Dijk, 1999),
‘pay-per society’ (Vincent Mosco, 1989) etc.
There are two research questions. First question is how the Korean CMC industry can grow fast after its birth. Three main subjects were dealt with in this research. They are the State, the Market, and the Citizen. I divided the history of Korean CMC industry into three periods. The first formation stage is from the birth of CMC in Korea between from 1980 and 1990. The government initiated the monopolistic CMC market. Several conglomerates participated to co-operate the government. But the users are very small. The second growth stage is between from 1990 to 1995. The government also deregulated the Market with changing policy from 'appointment' to 'registration'. The companies increased investment for the possibility of wide diffusion of CMC use. The third prosperity stage is between 1995 and 2010. The government promoted the CMC market's competition with 'notice' policy. And citizens actively enjoy and apply CMC services. However, the fourth shift stage to smartphone faced several problems such as less democracy and one way communication which will weaken the creativity of the content.

Second question is what the roles of three subjects are. I examined the cyber space by the uses of digital media with three subjects. Even though the state and the market have limits to promote democracy, the citizens are expected to make the digital society more democratic. If the state tries to monitor citizen by the use of digital media, that society is called ‘surveillance society’. As the government is open and transparent, the citizens’ democracy will increase. The market should limit to gather and accumulate peoples’ information and profile for protecting their privacy.

Cyber space is two-way, economic, and open to every people. It has various positive sides. It promotes the communication by people of political information and opinion freely and actively. It makes people form groups against the wrong-doing of big companies and keeps people’s privileges. People buy goods more cheaply via e-commerce, which also helps companies lessen the expenses.

However, the cyber space has several negative sides, too. The government and companies can accumulate people's information and use it for diverse purposes. If the government uses that information to monitor and control people, such a society may become a 'surveillance society' threatening democracy as in George Orwell’s ‘1984’. As companies also take advantage of big data to sell more products for their profit increase, so people often feel they are captivated by a lot of commercial messages, including much advertising spam-mail. The more civil society depends on the cyber space, the more it can become fragile and risky.

The digital media guarantees neither democracy nor a surveillance society. It's true that new technology gives us the opportunity to expand democracy. However, if we don't use new media rightly and positively, we may find it negative or even harmless. Therefore, the positive use of the digital media and keeping our cyber space democratic is very important. With democracy, the Internet and SNS industry can be flourished by the cooperation of netizen, business managers, IT researchers, and politicians.

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