Digital divide: The shadow of network society

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The Korea Herald celebrated its 55th anniversary on Aug. 15. To mark the occasion, we have been offering special reports analyzing the impact of the IT revolution on Korean society. A group of renowned experts will shed light on new trends emerging in political, economic, social and cultural dimensions. The following is the 13th installment. - Ed.

I. Digital shadow of digital Korea

We live in times of dramatic change. Information and communications technology is increasingly becoming the foundation of our societies and economies. All countries, even the least developed countries, are increasing their access to and use of ICT at an exponential rate, but the divide between countries is actually growing. Within countries, even the poorest groups are increasing their access to and use of ICT. But within countries those with access to information are increasing access and use of ICT at such an exponential rate that, in practice, the division within countries is also growing. Because ICT can reward those who know how to use it with increased income and cultural and political advantages, the resulting digital divide exacerbates existing disparities based on gender, age and income.

Korea has the highest broadband penetration rate in the world. Here, the internet is seen as an electronic public sphere. A public sphere is a forum where citizens can exchange views on matters of importance, so that public opinion can be formed. It is clear that the internet significantly lowers entry barriers and other cost factors for participation in public debate. These lowered barriers, accordingly, open up a space for minorities, information have-nots and other various groups, which brings more participants into the public sphere.

II. Issue in discussing the digital divide

This century, digital information has come to our society promises of a more convenient, better-off and, therefore, happier world for everyone. But most people overlook the dark shadow behind the rosy picture. ICT can help improve productivity and efficiency in almost all fields such as politics, economy, society, and culture. But, there is concern that the access is not distributed equally across social groups by income, geographical area, and educational attainment, etc.

What is the digital divide?

The information gap between people with skills and people who have relatively inferior ability has been labeled a digital divide. More specifically, the digital divide includes multidimensional inequalities in ICT access and usage globally, nationally, locally, and individually. As the information society has developed rapidly, the digital divide has revealed social patterns that vary systematically and meaningfully among certain groups. Therefore, this digital divide has become an important social issue for policy makers.
There are multiple definitions of the digital divide, with some defining it as a lack of internet use between countries, and some focusing on gaps in access between socio-economic groups within countries. In general, the digital divide refers to the gap between those people with effective access to digital and information technology and those without. It includes the imbalances in physical access to technology as well as the imbalances in resources and skills needed to effectively participate as a digital citizen. In other words, it is the unequal access by some members of the society to information and communications technology, and the unequal acquisition of related skills. Groups often discussed in the context of a digital divide include socioeconomic, racial, generational or geographical. The term global digital divide refers to differences in technology access between countries.

In sum, the digital divide means the multi-dimensional inequalities in ICTs access and use at the individual, community, state, and global level. So, the digital divide not only spans physical access, financial access, cognitive access, content access and political access, but also various inequalities in terms of equipment, location of access, skill, social support, and purposes for using the ICTs. The most commonly used definition is the notion of the gap that exists between the information haves and have-nots. Whether or not the gap is widening or narrowing, a gap exists in terms of access to information or information technology.

Why does it occur?

What causes the digital divide? Previous studies have identified three levels of causes. The first, micro or individual level includes such factors as socioeconomic status, educational level, gender, ethnicity, life-stage, language, media use, occupation and physical ability. In general, personal information capacity is higher for higher income and more highly educated people. Younger people are more IT literate, and men tend to be more IT literate than women. Also, white-collar workers tend to be more IT literate than blue-collar workers. In Korea, statistics show that computer ownership and internet usage of those in the agricultural, forestry, and fishery industries tend to be lower than those of workers in other sectors. Physically and mentally disabled people tend to be less IT literate than nondisabled people.

The second, meso level, includes such factors as geographic location, community resources, social network, organization and neighborhood. People residing in urban areas are more IT literate than those in rural areas and people with more community resources have higher information capacity than people with relatively fewer community resources. Similarly, people with close-knit social networks, ties to strong or wealthy organizations, and people residing in communities with higher connectivity are all more likely to have higher ICT capacity.

The third is the macro level. This level represents the social structural context and factors, such as level of socioeconomic development, governmental policy, NGOs (nongovernmental organizations), international development initiatives, technological infrastructure, culture and democracy. At this level, ICT capacity is increased by a country's level of socio-economic development, level of investment and policy focus on the ICT industry, greater technological infrastructure, ICT-friendly culture, high level of democratic governance, a high number of NGOs or positive activity of NGOs and international development initiatives.

III. The digital divide exists and matters

Korea is leading the digital world. In 2007 the nation ranked first place in Digital Opportunity Index for the third consecutive year; the nation's WiBro, the portable internet, digital multimedia broadcasting and handheld TV's were acknowledged as the global standard for each technology.

Current status of the digital divide

In 2007, Korea's internet usage reached 76.3 percent, grouped by the metropolitan areas (101.9 percent), and rural areas (71.2 percent). The gap of internet usage rate by region has also increased from 16.6 in 2001 to a 23.7 percentage point difference in 2007. As shown by Table 1, the digital divide exists in Korea. A rising and falling gap exists between those who have access to ICT resources and those who are deprived of such access due to gaps in their education, poor digital infrastructure or lack of advanced computer equipment.
Major achievements and their significance

Korea launched the second Master Plan for Bridging the Digital Divide, aiming to raise the informatization ratio between the disadvantaged and the general public from 53.3 percent as of 2005 to 80 percent by the year 2010. The ratio reached 65.9 percent as of 2007. Comparing the rates to those from the year 2005, the ratio increased from 65.2 percent to 76.0 percent among the disabled, from 64.2 percent to 75.5 percent among the low-income population, from 41.7 percent to 54.6 percent among the rural population, and from 49.3 percent to 62.6 percent among senior citizens.

Nevertheless, excellent infrastructure and high internet usage rates alone are meaningless without pragmatic solutions and benefits. Governments and organizations now must focus on providing more opportunities through information for the public to encourage their creativity.

The year 2007's major achievements are as follows:

- Offered IT education to 384,989 people with disabilities, senior citizens, the illiterate, immigrants, and North Korean refugees, which exceeded the expected number by 123.8 percent.

- Developed and distributed 16 educational programs, increased the internet use of the disadvantaged to 40.1 percent, which is 5.0 percent higher than the previous year.

- Increased the ratio of the informatization level of the disadvantaged to the general public by 3.9 from that of the previous year, reflecting the reduced information gap.

As every country attempts to integrate its citizens, many governments are recognizing that they must take the digital divide seriously. Otherwise, integration will remain a socially and economically unfeasible vision. In the past, the digital divide was not seen as a problem in informatization policy. In fact, the digital divide is often a reflection of deeper socio-economic inequalities between countries and regions. A variety of avenues have been taken to bridge the digital divide. Primarily, there have been efforts to encourage the use of existing technology, guarantee more people internet access, and advocate internet creativity. Many of these programs are interesting and noteworthy but it will take a great deal of government will to accomplish them.

IV. Government initiatives to bridge the digital divide

The Korean government launched a national plan called "Cyber Korea 21" in March 1999. Under this plan, the government initiated policies encouraging a wider adoption of the internet by financially supporting internet service providers. The Cyber Korea 21 plan states, "The Korean government has a special concern on digital divide issues. All Koreans, regardless of their age, sex, region and income should have the opportunity to use computers and the internet ..."

In this context, the Korean government has attempted to bridge the digital gap through programs designed to extend the information and communication network to rural areas, subsidize information devices and service subscription fees, install IT education centers, and provide education about information technology to individuals who want to study ICT. From 2000 to 2002, the government conducted the "IT Education for 10 Million Citizens Program." The "Second Phase Citizen IT Education Program" has been underway since the second half of 2002. The first phase of the program had a goal of improving information usage by offering education to all citizens. The second phase aimed to unify the newly educated digital society - enabling all citizens to participate in social activities by providing easy access and use of necessary information.

The Korean government is actively pursuing programs designed to supply intermediate and practical education to the digitally vulnerable class. The Former Ministry of Information and Communication implemented various IT education programs for the disabled in order to improve their adaptability and help them find employment. Among others, these programs include equipment and operational support for organizations, nationwide development of
specialized trainers in order to improve the educational level of the disabled community, encouragement of online classes, and the development of standard lecture material for the hearing and sight disabled.

The Korea Agency for Digital Opportunity and Promotion also has a variety of programs to promote digital literacy and access to computers. These include establishing 8,263 Local Information Access Centers throughout Korea where the public can access the internet for free, distributing free used PCs to the disabled and to those receiving public assistance, and education and training programs for the elderly and disabled. In addition, the government realized that broadband demand would not increase if its citizens did not have access to a PC at home. As a result, the PC diffusion promotion established in 1999 aimed to provide PCs at low prices, partly through a PC purchase installment plan using the postal savings system. Through this program the government purchased 50,000 PCs, providing them to low-income families on a four-year lease with full support for broadband free for five years. On the basis of the rate of individuals that use the internet and PC ownership rate of household, Korea is entering the stage of saturation.

V. Implications

The nature of Korea's remarkable adoption of the Internet and its rapid penetration among the populace has been quite different from the situation in other countries. In particular, family support is one of the most important factors. The social support from family members has just as much of an effect on the internet user as does group pressure and social facilitation. This can be readily seen in the rapid expansion of internet facilities in public areas such as government offices and institutions, not to mention the ubiquitous PC rooms that have sprouted up all over Korea.

Also, government can play a fundamental role in creating an environment that will foster technology use and encourage national investment in ICT infrastructure. Government will also be important in spreading the benefits of technology through society from now on, and government has a mandate to balance the needs of their citizens for economic growth and social prosperity.

The basic line of information welfare should be planned by public-private governance. Although Korea is an information-based society, the disadvantaged population, such as the disabled and low-income class, don't have sufficient access. Therefore, additional support to bridge the digital divide for the information poor is needed, and equal information accessibility for the disadvantaged should be secured.

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