

National Informatization and Regional Cooperation in East Asia

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DECAY OF THE NATION STATE: A MYTH IN GLOBAL INFORMATIZATION

One keynote of global informatization is state minimalism: no state intervention or regulation of free economic activities by private individuals or businesses. In other words, with the evolution of an information society, the nation state, the traditional principal body of international politics, will decay¹⁾ and its role diminish to allow private individuals and business more freedom and more options. Is such a decay of the nation state in the information society a myth or a reality? Are the functions of a nation: such as integration, adjustment and leadership, no longer necessary in an information society? And how universal is the argument based on neo-liberalism that the nation states' role must be reduced because of global informatization?

Recently advanced countries, on a nation state level, are exerting all possible efforts to build high-speed information networks and

1) Paul, Kennedy, *Preparing for the Twenty-first Century* (Random House, New York, 1993), pp. 128-129.

information superhighways, at the same time rushing to interface information networks with other countries. Judging by each country's informatization policies, the role of the state is becoming increasingly important, rather than showing signs of decay. Even in the U.S., where private individuals and businesses take on a major role in information and telecommunications, the state's meticulous information policies integrate, adjust and lead the overall development of the information and telecommunications field. In a sense, even amid the global trend of open and free international trade, hegemonic states of information technologies are adopting assertive techno-nationalism as the keynote of their science and technology policies in order to maintain their international competitive edge in information technologies.

Advanced western countries are faced with the desperate need to reform politics and nations' inefficiencies in order to overcome the "over-loaded state" phenomena created along with the enhancement of welfare after modernization. And in the global market, western countries are gradually losing their hegemony as challenges arise from fast-developing non-western countries. As a result, these countries have been forced to rid themselves of socio-political responsibilities concentrated on the state-level and revive their pallid private sector. Consequently, under the neo-liberalist paradigm, various regulations have been eased and open competition has been encouraged to stimulate non-state sectors. Reform based on neo-liberalism in advanced countries was the natural consequence of efforts to reform the nation and regain international leadership. Therefore, the opening of markets and deregulation to enable structural reform must be considered not as phases of gradual decay, but as a part of internal reforms to strengthen national competitiveness. Furthermore, such reforms by western countries are aggressive and innovative. In particular, in terms of informatization, state-level initiatives play the essential roles. Informatization simultaneously requires social restructuring. The dominant prerequisite for successful informatization is not

advanced technology but a state's strong will and dedication, and this is why a state's paradigm and informatization model is so important.

Meanwhile, the reorganization of the global market led by leaders of informatization is worsening dependency in the global economy by widening the economic gaps between advanced and developing countries, intensifying global competition and creating dominant capital and technology blocks. Against this neo-liberalistic backdrop, stronger cooperation in the global economy and the information regime is only taking place among key advanced countries. And actually, vertical subordination between developed and underdeveloped in informatization, is worsening. The digital information industry led by the United States is growing at a high speed and is expected to intensify competition as markets open up. Therefore, it is vital that Korea, facing with market openings and fierce competition, develop a thorough information policy on a nation state-level as well as a development strategy and model that can effectively compete with informatization leaders. In order to overcome the structural limitations imposed on late-runner of informatization in the global information regime, the effective leadership of nation state is necessary.

STATE INITIATIVES AND DIGITAL DIVIDES

It is well known that with the beginning of the 1990s, the United States emerged from its economic slump of the 1980s and surpassed the Japanese economy with sustained growth supported by low inflation and low unemployment rates. Many explanations are given for the forces that enabled such growth. Among them, the most important force was regarded to be the successful innovation of the information technology (IT) industry and bold development of the digital industry which were actively led by the U.S. government.²⁾ In

particular, the economy boomed because the U.S. successfully exercised economic flexibility and increased efficiency in the markets by aggressively investing in innovative digital technologies, while effectively restructuring financial markets, the government and businesses. The Reagan administration laid the foundation for corporate restructuring by making labor markets more flexible, easing regulations and cutting taxes. While carrying on the policies of the Reagan administration, the Clinton administration has led IT innovation by encouraging businesses to invest in the IT industry and building information superhighways. The new administration immediately introduced the concept of a digital government to secure a leading position in the international arena before the arrival of the information society and, more importantly, as part of its initiative of government reform. In September 1993, the Clinton administration formalized the concept into a National Performance Review (NPR) policy based on the Paperwork Reduction Act, introduced early in the 1980s as part of the nation's efforts to build a National Information Infrastructure (NII), and the Government Performance and Result Act introduced in the same year.

To articulate and implement the Administration's visions for the NII, an Information Infrastructure Task Force (IITF) was organized and is operated under the Office of Science and Technology Policy in White House and the National Economic Council. The NII has connected government offices, businesses, schools, hospitals and homes to high-speed information networks, enabling easy access to multimedia information, strengthening U.S. competitiveness, and improving welfare in terms of education and medical service. As a result of such efforts, the United States has been able to realize the so-called "new economy" supported by high growth and low inflation.³⁾

2) Takashi Imai, "Japan and the IT Revolution," http://www.glocom.org/opinions/essays/200007_imai_it_revolution/index.html, 2000.

3) *Business Week*, Jan. 31, 2000.

Using the government-led restructuring and informatization initiative as a foundation, open-data networks based on the Internet have doubled, and networking technologies utilizing the world wide web (WWW) or other data services have grown astronomically during the 10-year period since 1989. Consequently, the U.S. is now the front-runner of global IT and is actively exporting state-of-the-art telecommunications technologies and services. With a broad and deep impact on all areas of human life, such as education, health and the environment, the IT revolution will fundamentally change life as we know it. The United States' success in informatization was enabled by drastic, government-led innovation through restructuring.⁴⁾

Contrasting with the United States' success story, Japan's road to informatization lacked policy direction. Currently, Japan is lagging behind the U.S. in terms of the IT revolution, but it was only a couple of decades ago that Japan was leading the so-called future information society.⁵⁾ It was Japan who was winning over advanced western countries, successfully pushing forward in industrialization with spectacular developments in state-of-the-art information technologies based on advancements in microprocessors. Industrial development rooted in automated computer systems occurred in all areas, from small home appliances to industrial-sized machinery. With such striking developments, Japan was called the Kingdom of the ICs in the early 1980s. At the time, Japan was definitely ahead of the U.S. in terms of the IC industry. Then how was Japan surpassed by the United States in such a short period of time?

It is worth investigating why Japan began to lose ground to the United States in IT. Many reasons have been suggested, but the most convincing explanation is that the very forces that had enabled the

4) George, Gilder, *Microcosm: The Quantum Revolution in Economics and Technology*. (New York: Simon and Schuster, 1989), p. 330.

5) Kumon, Shumpei, "How Japan Fell Behind in Informatization," <http://www.glocom.ac.jp/lib/kumon/99/informatization.html>, 1999.

modernization of Japan, were blocking development. In other words, because Japan was so obsessed with its past success in modernization, it was unable to catch up with the changes in the economic environment brought on by informatization. The Japanese style of responding to crises, once admired by the western world, was useless in the information age. Traditional methods such as downsizing, energy conservation, mass production and export growth were no longer effective informatization strategies.⁶⁾ When the new media boom began in the 1980s, Japan was dwelling in a traditional paradigm of the past rather than embarking on fundamental reforms that would drive an IT revolution. Today, Japan is drifting in all areas, not just in economic matters, but also in politics, foreign affairs and education, and it has no clear national vision for the future. Now, more than ever, Japan desperately needs a development model.⁷⁾

It is also true that in addition to a lack of government dedication and will, Japan made some wrong decisions in terms of technologies and strategies, which have resulted in the lag. One definite example is the Japanese government's huge investment in ISDN, which is generally regarded as less effective than DSL in terms of speed and cost. In this regard, Korea secured a competitive position in informatization since it chose to introduce ADSL like the U.S. The cost of accessing the Internet in Korea is one-third that of Japan, and as a result, the level of Internet use in Japan is lower than Korea. HDTV is another example. Japan's cable TV penetration rate is significantly lower than the U.S. and NTT's long-distance line quality is poor. However, such poor decisions are not the main reason for Japan's weakness in informatization. Recent informatization campaigns led by the Japanese government are based on the realization that the government's policies and decisions are vital for the success of a country's informatization efforts. The Japanese press

6) Kumon Shumpei, *ibid.*

7) Suzuki, Jukio, "Japan Flounders without Goals," *The Japan Times*, September 4, 2000.

is stressing the importance of the IT revolution and are writing numerous articles on digital governments and electronic commerce. Such government-led campaigns, implemented under the slogan of the Rebirth of Japan are gaining favorable support from all sectors. Japan aspires to surpass the U.S. and to emerge as the IT superpower within five years. With this aim, the government and businesses have decided to closely work together to develop by the end of the year a national blueprint for advancing digital technologies.⁸⁾

Prime Minister Yoshiro Mori has pledged to reform all out-dated regulations that inhibit the development of the IT industry and to introduce a new legal framework promoting competition in the IT industry.⁹⁾ In the Japanese government's 2001 budget plan, the IT-related budget is 52.6 billion yen, three times that allocated in the 2000 budget. The proposed budget is planned to fund a wide range of large-scale projects, such as completion of the digital government; structural reforms in education, the social-sector and IT industry; and support of small IT businesses.¹⁰⁾

It is clear that government initiatives play a vital role in informatization. To guarantee success of an informatization initiative, national will and ethical concerns must come before technological concerns. Also, informatization must be supported by social changes and be concurrent with social restructuring. Balanced development throughout the country is not possible simply through massive government investment in one concentrated area. In addition to building infrastructures for informatization, a social framework to support that informatization and an information-oriented attitude among the people must be established. Therefore, the government's paradigm and its approach to informatization are of utmost importance. What is the relationship between the society and the Internet as an open network? And what strategy for social

8) *The Japan Times*, August 31, 2000.

9) *The Japan Times*, July 18, 2000.

10) *The Japan Times*, August 30, 2000.

reform will guarantee the success of the IT revolution?

STRATEGIES OF NATIONAL INFORMATIZATION

Given that the IT revolution will bring changes in the social structure and organization, what strategy model will ensure successful informatization? Considering IT revolution and its impact on the social structure, only a paradigm suitable for an information society will enable effective informatization. In this respect, three distinctively different strategy models can be considered: the waterfall model, the horizontal hierarchy model and the Silicon Valley model.¹¹⁾ The waterfall model refers to a development model maintaining well-structured organizational integration. In this model, the streamlined order of command between top and bottom serves as the power of change. In a stable and conservative society this model brings gradual social evolution and enables incremental development while maintaining the balance of the existing structure. However, as a society becomes more advanced and complicated, this model may lose its effectiveness because both demands from the bottom and flows of up-to-date information to the top can be structurally blocked. So, while normal operations and continuous management are not inhibited, quality control of the organization's production process during the revolution period is impossible. In this regard, the horizontal hierarchy model includes highly innovative elements that complement the weaknesses of the waterfall model. The horizontal hierarchy model is the very model that enabled Japan's successful modernization. From the late 1970s to the early 1980s, Japan effectively dominated the global market with this model. Its strength

11) Masahiko Aoki, *The Japanese Firm May be Becoming too Rigid for Information-Sharing in the Digital Age*, http://www.glocom.org/opinions/essays/200008_aoki_info_sharing/index.html, 2000.

was that it allowed horizontal information-sharing between organizations, in addition to the vertical information feedback of the waterfall model. Japanese companies were able to realize a finely-tuned coordination of organizations and structures through the horizontal hierarchy model.

Lastly, the Silicon Valley model overcomes the weaknesses of both previous models and offers a new challenge for successful national informatization. The information society demands a new model fundamentally different from the traditional development strategies Japan depended upon in the past. The organizations and structures of the information society can no longer accommodate production styles defined by the fine controls and regulations of the industrial age. Free and open competition among private individuals and businesses on open networks has become the basic framework of economic production, in which innovative ideas for new products develop from creative market participation between various competing businesses and private individuals, rather than from centralized organizational control. In such an environment, it is extremely important for an organization to be flexible. Therefore, only companies and states capable of effectively building flexibility into their organizations will be able to succeed.

There is intense competition for Internet development among East Asian countries to become IT center of the Asia Pacific region. Even Bill Gates admits that Asia is the fastest-growing region in informatization, and the number of Internet users, currently estimated to be around 20 million, is expected to grow to approximately 63 million by 2003, with electronic commerce forecasted to increase to around 32 billion.¹²⁾ One interesting development is that Singapore, the ideal of Asian values, is the front-runner of informatization in Asia, surpassing Japan, Taiwan and Korea, the champions of modern industrialization in East Asia.

12) *The Korea Herald*, June 15, 2000.

Statistics support Singapore's lead over other countries in terms of Internet use. As of September 2000, among those over the age of 15, the ratio of Internet users is 46% in Singapore, 42% in Korea, 36.4% in Taiwan, 29.2% in Hong Kong and 23% in China.¹³⁾ How can the frontrunner of informatization be Singapore, a relatively authoritarian, controlled country dominated by Asian values?

Regardless of its national ideology, Singapore, under the leadership of the government, quickly adopted the Silicon Valley model. Early in 1992, Singapore drafted the national informatization plan, "IT 2000." Considering that even the United States, the ultimate leader of informatization, devised the strategy for the information superhighway in 1993, it is clear that Singapore was quick to recognize the importance of informatization at a state level. Singapore's "IT 2000" strategy aims to develop it into a country of state-of-the-art information and knowledge. Drastic policies were put into place to enable information and knowledge to be freely exchanged through an information superhighway connecting government agencies, businesses, homes and schools. Consequently, as of September 2000, 53 percent of Singapore households have access to the Internet, even surpassing the United States 50 percent.¹⁴⁾

In Singapore, informatization is driven by the government but the strategy is different from the waterfall model or the horizontal hierarchy model. The government supports and drives the IT industry, but rather than directly interfering and controlling businesses and the industry, it limits its scope to simply providing indirect general assistance to IT companies.¹⁵⁾ In an extremely short period of time, Asian countries successfully replicated the modernization that had taken western countries centuries to

13) Netvalue, Netvalue Releases "First Figures on Asian Market," (September, 4) [http:// www.netvalue.com](http://www.netvalue.com), 2000.

14) Netvalue, *ibid.*

15) Song Min-sun, "Asian IT round up: How does Korea Stack up against Neighbors in Crucial Infrastructure?" *The Korea Herald*, April 14, 2000.

accomplish. During the course of this high-speed modernization, power triangles were built between politicians, businessmen and government officials and this served as the power engine for rapid development. However, now in the information age, such developments models are no longer valid and, in fact, act as stumbling blocks. Asia's rush-to development has been supported by capital and labor promoted by a strong and authoritarian state power.¹⁶⁾

The government controlled and distributed all social resources to promote, export, and create jobs. Financial institutions, controlled and protected by the government to achieve the development goals set by the government, lost their abilities and same as autonomy. Domestic companies were developed like plants in a greenhouse, shielded by the government through various protective policies. Furthermore, patrimonial relationships and crony capitalism developed to monopolize core businesses. In a market where such relations coexist, there is almost no conflict between corporate management and shareholders, since companies are tightly controlled by a patriarchal system.¹⁷⁾ Indeed, such Asian development models have enabled many Asian countries to enjoy spectacular success. According to the World Bank and the Asia Development Bank (ADB), during the period from 1980 to 1991, while other countries of the world recorded an average annual growth rate of 1.3%, Asia exhibited remarkable growth rates: Taiwan 9.8%, Korea 8.7%, China 7.8%, Thailand 5.9% and Hong Kong 5.6%.

However, the climate totally changed in the 1990s. As globalization demanded more transparency and responsibility from governments and businesses, Asian countries were faced with unprecedented challenges. The ineptitude and inefficiencies of

16) Han Sang-jin, "The Korean Path to Modernization and Risk Society," *The Korea Journal*, Vol. 39 no. 1, 1998, pp. 5-27.

17) Toyoo Gyohten, "Revitalization of Asia," http://www.glocom.org/opinions/essays/200005_gyohten_revitaliz_asia/index.html, 2000.

governments and businesses unable to respond to rapidly changes environments manifested and uncertainties in the markets loomed. Recent challenges against Asian capitalism can be regarded as the consequence of such insecurities. Whereas close ties between governments, banks and conglomerates were the driving force of development in the past, they had now become a source of corruption and incompetence.

Now, the new challenge for East Asia is the structural reform of these past legacies. Considering past successes of East Asian countries, such reforms will require a totally different creative approach, as well as each government's dedication. In addition, a development model that can reform the social structure to suit the information age, must be boldly adopted and continuously reinforced. Still, as shown in Korea and Japan, there is no clear evidence that East Asian countries in need of reform are actually taking necessary actions and successfully reforming. The Japanese labor market remains rigid and financial losses are rising steeply. Under such circumstances, if IT investments are hastily expanded without necessary social reforms or restructuring, bubbles in the Japanese stock market will only grow bigger at accelerated speed.¹⁸⁾ In this respect, the outlook for Korea is not that bright either. Despite the successful implementation of economic reforms since President Kim Dae-jung took office and aggressive investments in the IT industry, the level of development is less than satisfactory. The stock prices of IT-related start-ups listed in the Korea Securities Dealer Automatied Quotation (KOSDAQ) have fallen drastically from last year s levels. In fact, half of the 1.8 billion dollars invested in the 1st quarter of 2000 have left the market.¹⁹⁾ In the end, all this points to the crucial fact that social reform and restructuring are prerequisites

18) Yun Seong-hun, "Transition to U.S.-Style 'New Economy' Calls for Through Restructuring of Korea System," *The Korea Herald*, March 27, 2000.

19) Kim Min-jung, "Korean dot-com Companies at Survival Crossroads," *The Korea Herald*, May 24, 2000.

for an IT revolution. Asia's nation states are currently in desperate need of a paradigm for a new information society.

The direction that Asian nation states must take in order to cope with the global informatization trend have already been outlined to some degree. To enhance the efficiency and competitiveness of governments and social organizations, Asian countries must proactively adopt the Silicon Valley model. But the road ahead for Asian nation states, currently behind in informatization, is definitely not a smooth one. It will be a major challenge to compete with the level of informatization leaders now at the helm of the global market. In addition, the underlying unfairness of the global information regime will put late comers at a distinct disadvantage.

LIMITATIONS UPON NATION STATE

With the advancement of global informatization and the growing interdependence of countries in the world, proponents of open and competitive global information argue that both established and new members of informatization must work together in order to share benefits. However, the lofty idea is far from the reality. As global informatization progresses, early adopters of informatization reap significantly more benefits than those who enter the game later.

Because of the innate structural nature of the global information regime, late-runners inevitably face limitations in undertaking their roles as nation states. First, inequalities in the process and outcomes of negotiations exist, just as they are apparent in transactions. For instance, in the framework of the global information regime, if a late-runner resorts to protectionism, the informatization-leader counterpart will take retaliatory actions such as the Super 301. Furthermore, the leaders control options and choices, and the late-runner has no choice but to make a selection from those options offered. In this situation, one party always gets more while the other is always left with much less. In summary, while promoting

openness and competition in the markets can benefit informatization beginners as well as leaders, much more goes to front-runners with a competitive edge in technology and capital. In this vicious circle, the information dependency of late-comers is perpetuated.

The second issue is subjectivity of values. Depending on an individual country's situation and surrounding circumstances, policies may have subjective value and weight totally different from that given by a global information regime. An example is nations' divergent views of electronic commerce (EC). The United States maintains that no duties should be imposed on goods traded through electronic commerce, and that there should be no new domestic taxes levied on EC goods. The EU, on the other hand, takes a more cautious attitude towards making services duty-free. In Asia, Japan armed with advanced technologies in computers, games and software is anxious to make EC duty-free while Singapore opposes the idea. Korea wants to secure taxation rights to EC. Currently, value-added taxes (VAT) are imposed by the vendor and since most EC vendors are from advanced countries, most tax revenues will naturally go to those foreign countries. Despite such circumstances, the United States, the ultimate leader of the global information regime is trying to expand EC, currently operating sixteen EC support centers, to secure its position as the dominant supplier of the EC market. For this, it is expected to demand through the World Trade Organization (WTO) that government regulations to limit competition must be restricted.

It is fundamentally impossible to compare the value and use priorities between countries leading informatization and those lagging behind. Each country has various, specific needs regarding information and telecommunications. Some countries are in desperate need of a basic telecommunication infrastructure, while others that already have firm foundations are now focusing on satellite communication or information superhighways. In light of the fact that more than half of the world's population live in countries where there is one telephone per million people, it is clear

that the information and telecommunication needs of different countries cannot be measured with one yardstick. However, in a global information regime it is not easy to one's own case.

The third issue is the differences in bargaining power. When viewed as a framework for multilateral negotiations, there is a clear gap between the bargaining power of informatization-developed and that of developing countries in the global information regime. Such uneven negotiations stem from the threat advantage that informatization leaders hold over those who enter late in the game. Examples would include America's use of aggressive reciprocity and the exclusion of nations from Most Favored Nation (MFN) status. It refers to situations where an advanced nation secures a superior position in a negotiation by demonstrating to the other party the possible severity of BATNAs (best alternative to negotiated agreement) such as retaliation or economic sanctions if negotiations fail. Such tactics are used in trade negotiations to gain the upper hand in talks. Before the Uruguay Round, negotiations were mostly held at national-level, but under the framework of the WTO, individual companies negotiate with private citizens and in individual markets. Hence, differences in bargaining power affects informatization later-runners that lag behind in capital and technologies. In many cases, such negotiations will probably be a win-lose game rather than a positive-sum negotiation.

EXIT FOR DIGITAL DIVIDE: ENHANCING REGIONAL COOPERATION

Is there a way to overcome the wide gap between informatization front-runners and later-runners? In the grand global trend of informatization, the challenges that informatization newcomers face clearly show that all problems cannot be solved through the internal reform of nation states, but that regional

cooperation is also crucial. Recent expansions of the global information regime and the globalization trend demand regional cooperation on economic issues between East Asian countries. In particular, the striking development of the IT industry has made countries more dependent on each other, and has actually made it impossible for countries to survive on their own. With Eastern Europe forming a single market and North America forming another, discussions on the need for East Asia to do the same have been under way.

Then, what form will regional cooperation in IT take in Asia? Plainly stated, successful regional cooperation cannot be guaranteed by cooperation within Asia alone. As evidenced by the United States sole victory in IT, despite recent strong growth in the IT industry throughout the world, the biggest winners in the computer business are the ones that developed the infrastructure. Since the U.S. has all the core technologies for a sound infrastructure—from microprocessors and basic software to servers and routers for the Internet, its economy will grow automatically along with the spread of IT throughout the world. Therefore, in terms of IT, a more realistic and effective framework for cooperation would be one that has the U.S. on one side and Asia on the other to enable the two sides to complement each other.

Currently in Asia, Japan has the expertise in new materials and production facilities, while Korea holds the lead in memory chips and general materials. Taiwan excels in the design and assembly of components, while other countries do in the assembly. Asia is strong in support industries while the U.S. is exceptionally powerful in core industries. Therefore, by cooperating through an international division of labor, a region could protect its interests and not be dragged down by leaders of informatization.

Then what form will regional cooperation in Asia take? When discussing the Asian economy, the focus is mainly on East Asian nations that have successfully achieved industrialization in a short period of time. Among those successes, the most noteworthy are

Japan, one of the strongest economic powers of the world; Korea, regarded for the past half century as a model of economic growth for developing countries with the world's tenth largest economy; and finally, China, recognized for its rapid growth and size. In fact, the fate of economic cooperation in East Asia lies in the hands of these three countries.²⁰⁾ However, one significant obstacle to cooperation between the three countries is China's reservations on the issue, namely, its concerns that such a framework for economic cooperation will enable Japan to assume hegemony over the region. Therefore, it is necessary to first establish a foundation for economic cooperation between Korea and Japan.

More ever than before, a favorable environment for cooperation is being created between Korea and Japan. Talks about establishing a Bilateral Investment Treaty (BIT) are under way, and cultural exchanges and mutual opening of cultural industries are moving forward at accelerated speed. While there are numerous hurdles to be overcome by the two countries, including differences in national competitiveness and culture, the prospect of East Asia's dynamic development in the 21st century demands effective and strategic cooperation between the two countries in IT technologies and services. To this end, cooperation between the two countries governments is needed to promote exchange of digital technology specialists and cross cooperation between businesses and schools. The two governments must play central roles in the Asian economic cooperation framework through joint research projects and global research programs.

CONCLUSION

In the information society, the classic view on the rise and fall of

20) Sagong Il, "Economic Cooperation Among Korea, Japan, and China," *Dong-A Ilbo*, August 10, 2000.

a nation may be invalid. Instead, nation's competitive strength will be enhanced when it truly prepares itself for an information society by effectively developing a vision for informatization, aggressively carrying out social and economic reform and actively supporting new ideas and methods of private individuals and businesses. The information policies of Japan and the United States clearly demonstrate the important role the government plays in informatization. However, in an information society, the role of a nation must not remain limited to that undertaken in an industrial society. Rather, it must adopt a new paradigm for development decentralization of social powers and for promoting an open society. Singapore's success in informatization is evidence that such an approach works.

Even if they assume the huge roles and responsibilities, the global environment does not favor their informatization success. One reason is the inherent unfairness in the global information regime. Therefore, under such circumstances, the late-comers to informatization must come up with sophisticated ways to catch up with the leaders, such as forming IT partnerships. A framework for regional cooperation among Korea, Japan and China can be one way of overcoming current weaknesses in the global information market dominated by the United States. In particular, the recent Korea-Japan cooperation framework is expected to salvage both countries from their current economic difficulties.