
Narrowing the Digital Divide between Northeast Asia and the North Pacific: How Regional Shifts Are Helping To Bridge the Gap

Meheroo Jussawalla and Richard D. Taylor

In Asia and the Pacific, the “digital divide” is a global and a specifically regional concern. Trade and investment are shifting from Southeast Asia (Malaysia, Singapore, Indonesia, the Philippines, and Thailand) to Northeast Asia (China, Korea, Japan, Hong Kong, and Chinese Taipei). Southeast Asia’s economies are growing more slowly, leading investors to find new epicenters of opportunity in the north. There are a variety of causes for this, and information technology clearly plays a key role in this transformation. This will have sweeping geopolitical consequences. Developments in the DPRK will be especially important, although the events of 11 September 2001 have made the picture more complex. Furthermore, the long-term trend suggests a growing Asia-Pacific regional “digital divide” as the economies of Northeast Asia forge ahead. This leaves some in Southeast Asia behind, but helps narrow the gap with the North Pacific (Alaska and Canada).

INTRODUCTION

Although a number of countries are involved in Northeast Asian developments, this paper focuses on the three that have been widely identified as the primary economic and political drivers of events in the region: Japan, China, and Korea. This paper addresses both the ROK and the DPRK, since the possibility of a unified Korea is a central issue. At the same time, it is also necessary to acknowledge the changed political environment due to the terrorist attacks in the United States in September 2001.

The testimony delivered by Mr. Brad F. Glosserman, Director of Research, Pacific Forum CSIS, before the U.S. House Committee on International Relations on 15 September 2001, emphasized that the events of 11 September “have shifted the diplomatic momentum in Northeast Asia and that the Prime Minister of Japan has been the chief beneficiary.”

Relations between Japan and its neighbors—China and South Korea—had been strained since the spring of 2001, as evidenced, for example, by the protests

in Seoul when Mr. Koizumi visited in August. Subsequently, Mr. Koizumi allayed the concerns of his neighbors by declaring his intention to be a good ally of the United States.

With its entry into the WTO, China becomes a potential threat to Japan's regional dominance. China threatens to eclipse Japan's role in world affairs. Despite the success of the G8 meeting in Okinawa and Japan's role in leading the interests of the emerging economies of Asia, China, based on its market for telecommunications equipment and services (and its nuclear arsenal), aspires to become the leader in Asian affairs.

The "flying geese" model (with Japan as the "lead goose") is no longer relevant to the growth of Japan's economy. However since 11 September and after China's entry to the WTO, Japan has been mending fences with its neighbors more rapidly.

While the Korean peninsula is in transition, it appears that the unification of the two Koreas may not come any time soon. If it comes at all, it will be greatly facilitated by telecommunications networks for personal contacts and satellite-beamed television programs directed at the people of the North to attract them to a better standard of living.

Despite its huge potential, economic cooperation in Northeast Asia was hindered by the "Iron Curtain," for a long period. Thus, expectations for the future of Northeast Asian economic cooperation were high when the Cold War ended.

However, there are still many obstacles such as diverse political and economic systems, lingering thorny political issues such as territorial disputes, national disparities in levels of economic development, and lack of a "community spirit." No serious attempt has been made to consider regional integration along the lines of the EU or NAFTA. Instead, Northeast Asian economic cooperation has been primarily regarded as economic cooperation between nearby localities across national boundaries.

Levels of cooperation lag far behind other regions of the world, and there is only a relatively small share of intra-regional trade and a low level of direct investment among the three countries. It is unlikely, therefore, that Korea, Japan, and China, whose development levels are highly diverse, will soon agree to form a regional trade arrangement.

Viewed from an economic perspective, the obstacles to development—formidable though they are—appear well worth overcoming. Given its resource complementarities, Northeast Asia constitutes, as Stanley Katz has noted, a "natural economic territory." Once the Northeast Asian economy is developed, it will contribute significantly to Asia's value-added chain and become a participant

in world trade, commerce, and industry. But realizing this potential depends on the ability of the countries concerned to bring together the north's natural and human resources with the south's capital and technology (Rowley, *The Region's Last Economic Frontier*, 2002). Information and telecommunications infrastructure and technologies play a key role in this process.

CHINA

In his plenary address to the Pacific Telecommunications Conference in Honolulu in January 2002, China's Minister of Information Industries, Wu Jichuan, addressed the liberalization of China Telecom, which had previously dominated all the major Chinese telecommunications markets, such as fixed lines, mobile phones, long distance, and data transmission.

After the breakup of China Telecom, Unicom got more support and was allowed to compete and use South Korean CDMA technology. Wu also announced that the northern provinces of China would have another independent telecom supplier, which will compete with China Telecom. Cable television companies are not allowed to provide phone services. Most people outside the cities have only one choice for their fixed line phones, which is China Telecom (Hugo Restall in the *Asian Wall Street Journal*, 23 May 2001).

Potentially, IT is making Chinese manufacturers more efficient and cost effective than before, and with entry to the WTO they will become more competitive in global markets. The handset and fiber optic markets are currently being supplied by Nokia, Ericsson, and Corning, but in the Tenth Five-Year Plan (2000–2005), domestic production of the handset market will increase from 5% to 50%. An important trend that bodes well for Northeast Asia cooperation is the fact that, among the five ITU-approved 3G standards for mobile communications, TDS-CDMA is being developed in China as a solution to the voice capacity situation. This is a welcome development for China's dense urban areas, where spectrum is a scarce resource.

China has proved, from the process of liberalizing its IT sector, that even a state-regulated economy can get significant growth in digital dividends. Does China provide a model for its neighbor, the Hermit Kingdom? Several networks are now competing. Unicom and Jitong were expanded, bandwidth wholesaler China Netcom was created, and the railway ministry was allowed to develop its own network commercially. The consumer market has been transformed. Consumers who had to pay hundreds of dollars to have a phone installed, and high fees for international calls, are now reaping the benefits of competition even in its beginning stages.

China's entry to the WTO is a significant event for the Northeast Asian region. It will have to provide greater access to its domestic markets and to other members of the WTO to reach its 1.3 billion consumers. China's current 40% restrictions on FDI and foreign participation in joint ventures will have to be greatly reduced. Drastic reductions in its tariff and non-tariff barriers will be required, as Chinese goods services and capital are given greater entry to foreign markets. China's two-way trade now totals \$475 billion per year. This makes it the world's seventh largest trading nation (Michael Dorgan, Knight Ridder News Service, 10 November 2001).

If China wishes to extend its telecom services to North Korea—and this should be feasible on political grounds—it can do so not only by extending land lines across the Tumen River, but also through use of wireless technology. China is adding two million cell phone users every month, and 14 million pagers annually. As the Tumen River valley develops and obtains wireless technology cheaply from either Japan or China, the prospects of the spill-over into North Korea will be positive and will change the infrastructure development of that country. Within China itself, the wealth gap is growing, because workers in Shanghai earn eight times more than the national per-capita income. The poverty belt stretches from Yunnan Province in the southwest to Xinjiang Province in the northwest. During 2001, Internet euphoria overtook China because of its historic conversion to a market-based economy (Hamlin 2001). This in part sustained the region's economy during the “dot.com” market adjustments of 2001.

REPUBLIC OF KOREA

South Korea has taken the lead in the telecommunications sector. It has sold its major banks and eliminated foreign ownership ceilings in almost all of its industries. About 30% of the population of South Korea are wired to the Internet. Wireless communication is spreading like wildfire in both South Korea and Japan. Competition between manufacturers of cell phones in Japan, Korea, and Taiwan has reduced the cost per subscriber. A policy alternative may be to bring North Korea into this network, if the large manufacturers such as NTT and Samsung could donate phones to Pyongyang or to the Tumen River basin as a trial measure to provide access to North Korea. Samsung has developed broadband access to mobile phones using CDMA technology that allows real time data, location information, e-mail, and downloading of music on cell phones. South Korea is the largest user in the world of the broadband spectrum. Broadband spectrum is a valuable natural resource, because it provides mobility to users and ubiquity for innovators.

LG Telecom is demanding a new regulatory environment that supports the government's goal to award a CDMA license. This involves a merger with Powercomm and fixed line broadband operator Hanaro, which wants a lower fee for the 3G license.

The government has already awarded two licenses for CDMA broadband to SKTelecom and Korea Telecom for \$1 billion each. The government is the majority shareholder in the Korea Electric Power Corporation (Kepeco), which is the majority shareholder in Powercomm. Meanwhile British Telecom's 24% stake in LG Telecom is still for sale and is worth \$220 million.

On 19 December, the Korean Broadcasting Commission licensed the KDB consortium (of more than 160 companies) to commence commercial satellite television broadcasting in October 2002. The satellite broadcasting business, along with IMT-2000 mobile telecommunications technology, represents a highpoint of multimedia information, through the combining of broadcasting and telecommunications that allows customers to interactively use satellite services (Hwang, *Prepare to Beam Up*, 2002).

So far North Korea has opposed a joint satellite communication network. As of 3 January 2002 the BBC reported that North Korea opposes an independent satellite system that would connect South Korea with the construction site of two nuclear reactors in the north. The South was willing to set up a communication network plan that included video conferencing. This was rejected by the government of the North.

A communiqué issued by the two heads of state, following their well-publicized meeting, committed their respective governments to: reducing tensions on the peninsula; planning for early reunification of families separated by the Korean War; working toward reunification via an interim form of confederation; and pledging both sides to engage in mutual cooperation and coexistence. Their agreement effectively opened the door to economic cooperation on a large scale, created a new market for foreign investors and traders, and promised to redefine the political and economic landscape of Northeast Asia.

Until recently, North-South trade had been on the increase. "Economic trade" (ET)—i.e., actual two-way trade as opposed to aid (officially classified as "non-economic trade" or NET)—rose to \$189.04 million in 1999 from a paltry \$18.72 million in 1989, when the government of the South first permitted trading with the DPRK. This represents an increase of 31.56% on 1998's ET of \$143.69 million. However, this rate of increase appears to have slowed in 2001.

Subsequently, in line with a promise made after the North agreed to call off a long-range missile test, the U.S. eased a package of sanctions. The lifting of these

sanctions will allow North Korea to export raw materials and goods to the U.S. It will also open air and shipping routes between the two countries. This move will also permit U.S. firms to sell American consumer goods as well as financial services to North Korea and permit investment in less sensitive areas.

DEMOCRATIC PEOPLE'S REPUBLIC OF KOREA

North Korea's Rajin-Sonbong special economic zone, which was widely regarded as a failure, seems to finally be gaining some vitality. The zone was established in December 1991 to attract foreign investment, but faltered because of the lack of infrastructure, North Korea's failure to carry out contracts, and attempts to lure unproved foreign companies. Of late, however, as Pyongyang actively seeks to mend its ties with Russia, there have been several notable infrastructure improvements. Almost 80 foreign companies from mainly China, Hong Kong, Thailand, and Japan have taken advantage of the new regime to invest \$150 million in the Ranjin-Songbong Economic Trading Zone in the DPRK's northeast.

In August, Northeast Asia Telephone and Telegraph completed the Naseon International Communications Center. The company is a joint venture of Thailand's Loxley Pacific and North Korea's state telecommunications firm. In 1995, Loxley obtained the right to exclusively provide telephone services for 27 years in the special economic zone and the surrounding area. Work began on the communications center in October 1999 with initial capital of \$4.5 million. The company has 2,000 subscribers for its fixed-line phone services and 2,000 more for its paging services. A company spokesman said it hopes to increase both numbers to 10,000 within two years. The company also plans to expand its mobile phone services.

Some of Korea's large companies, however, have been sending their investment projects in North Korea back to the drawing board. The nation's top business groups, including Samsung, LG, SK and Hanwha, have been engaged in overhauling their earlier plans to hike their investments and cooperation with North Korea. Observers commented that many of these large-scale investment projects could be mothballed. Also, the building of a large-scale industrial complex in Kyesung, which the two Koreas agreed upon earlier, has reportedly been making little headway. Samsung said it would scrap an investment project, which was announced in May last year for US\$500 million over the next 10 years in the North, if various infrastructure projects for investment in North Korea do not show any improvement. LG group, the second-largest group in the South, was in the process of setting up a bicycle assembly plant in North Korea's Rajin-

Sonbong industrial complex but recently decided not to move ahead with the project.

Currently traders cannot go ashore at picturesque Maizuri harbor, so all transactions have to take place aboard their ships. Thousands of used Japanese bicycles, TV sets, and used Japanese goods find their way to North Korea. As of 2001 there were 295 such trading ships in the Japanese harbor, carrying goods to North Korea. The two countries do not even have diplomatic relations, but trade takes place a few yards from Japanese soil. Perhaps this is an indication of how the North can be lured into modern technologies, even if by illegal transactions, as long as they are not harmful. Is the digital divide narrowing? Not if we look at legal transactions.

Sinuiju could emerge as a major site for distribution of goods and trade among the ROK, DPRK, and PRC, once the Kyongui Railway is connected with a double-track between North and South Korea. In addition to convenient traffic, Sinuiju has extremely advantageous conditions for a special economic zone in North Korea, such as surrounding lands, water for industrial use, and abundant electricity. Consequently, the possibility of designating Sinuiju as a special economic zone has been raised since the early 1990s. Additionally, it is uncertain yet whether Sinuiju would be able to attract South Korean and other foreign capital on a large scale. Some critics warn that if Sinuiju is designated as a special economic zone, it could do somewhat better than the Rajin-Sonbong, which is considered a failure. However, it could also become another Rajin-Sonbong.

Hyundai's official agreement with North Korea, to develop Kaesong into an economic and tourist special zone, was a landmark in the history of inter-Korean economic cooperation. Moreover, inter-Korean economic cooperation is expected to move beyond the previous level of processing-on-commission and to be upgraded to businesses conducted through the industrial complex within the special economic zone.

Economic sanctions against the North in the American market were eased, but only a limited part of the economic embargo was lifted. Exports to the U.S. are virtually impossible at the current stage. Exports to Japan and Europe would also be difficult, owing to relatively high tariffs. The prospects of entering the Chinese market are not quite bright either. The majority of products produced in the Kaesong industrial complex would be labor-intensive and involve low- and medium-priced products. As a matter of fact, China is the world's great exporter of such products.

JAPAN

Japan, the sturdiest and by far wealthiest country in the area, is still in the doldrums; whatever the indicators of significant structural and psychological change, the Japanese establishment has not found a way to resume high levels of growth or give vitality to domestic politics. While its sizeable aid programs throughout Asia are important, in many ways Japan has become a drag on the whole area. Worse still, the prospects for near-term change seem remote. (Abramowitz, *State of Northeast Asia*, 2001). However, this is not entirely true in the information and communications area.

A new pattern is emerging in economic exchanges between Japan and South Korea, and it promises to be a model for when the two countries sign a free trade agreement (FTA) and attempt to create a common market. At the center of this movement is information technology (IT), the key to the twenty-first century. Using IT, companies on both sides are trying to complement each other through the introduction of technology or products that the other does not have. In particular, the phenomenon of mobile phones among urban youth shows a similar pattern of growth in both countries. It was because of this that Asia Amuse and KDDI were able to work out a deal.

In the past, the South Korean economy followed the Japanese model, with its emphasis on heavy industry and export-led growth, and built a pyramid-shaped industrial structure with the *chaebol* (business conglomerates) at its center. This, however, created competition with Japan in export markets, and prevented the *chaebol* from moving into the Japanese market. All this changed with the arrival of the IT age. Korea's IT industry is flying high, and Korean companies are eager to invest in Japan.

In South Korea, Internet cafes, called PC Bangs or personal computer rooms, set off the IT boom. A company related to Samsung is trying to bring the craze to Japan. The company opened its first such cafe in Tokyo's Shibuya district in December and has plans to expand to more than 500 shops nationwide in three years.

In the IT business world, the phrase "Japan for wireless, South Korea for wired" refers to the areas of technology in which the respective nations excel. Japan was ahead in Internet services using mobile phones, whereas South Korea, which deregulated telecommunications and encouraged the use of personal computers after the economic crisis, witnessed rapid growth in high-speed Internet businesses. This is giving birth to cooperation between the two countries.

In the past, this tide proved rough for the economies of Japan and South Korea. However, as the exchanges taking place in IT demonstrate, both countries

can work together and compete through specialization and technological cooperation as they reform the industrial structure (Takeuchi, *IT Stage*, 2001).

In a survey, Jetro asked Japanese manufacturers to list their investment plans for the next five years. Although many of these will be in new or expanded capacities in the region, investors listed China ahead of Korea, Taiwan, and Thailand as potential investment sites. But two trends seem discernible. One is a strong shift in Japanese FDI flows to Northeast Asia from Southeast Asia. The second stems from the first, in what appears to be a reshuffling of Japanese FDI decision-making with a view toward greater cost efficiency, competitiveness, and also better corporate governance structures and stability than in Southeast Asia.

CONCLUSION

Investors and companies looking for growth in Asia are adopting a simple credo: "Go North."

The Asia-Pacific region's epicenter for technological advances is now located in China, South Korea, and Japan. This trend is creating a new Asian divide in which the Northeast is diverting investment from countries in the Southeast such as Thailand, the Philippines, Indonesia, and Malaysia. With China becoming a major player in the WTO, the countries of Southeast Asia are pushed into the position of competing with each other (Frank, *Asian Wall Street Journal*, 1 March 2001). Labor is cheaper in Northeast Asia. A factory worker in Shenzhen commands half the wage of one in Bangkok, and the salary of a middle manager in Cebu is 47% higher than one in Shanghai. China today accounts for 60% of total FDI in the region.

Last year Southeast Asia's economies grew 25% slower than the North's. In recent years, the North has attracted 10 times the foreign direct investment of the South. More than 80% of Asia's mergers and acquisitions last year were in the North—more than a third in Japan.

Yet experts say the potential upside for investors in the North—the wealthy consumer base in Japan, South Korea, and Taiwan and the giant population in China—far outweighs the current benefits of the Southeast. "The upside in the North is huge. But in the South, it's harder to see as much of an upside anymore."

With this background in the race for IT investments, and in light of the entry of China into the WTO, the Russian Far East and North Korea have to be included in plans for the modernization of IT infrastructure in the Northeast Asia region. Whether Japan and China will be able to overcome their internal problems and whether South Korea will be able to extend its wireless networks to the

North, will determine whether the fragile region can become stronger in the game of globalization.

Internet euphoria was quickly followed by Internet despair. Japan and much of Southeast Asia struggled for most of the year 2001. Fortunately, China's historic conversion to a market-based economy, requiring massive amounts of new capital, rescued what otherwise would have been a hugely disappointing year for Asian finance. Though China's privatization program helped lift the gloom in northeast Asia, it did not help change the atmosphere in Southeast Asia. That region's stock markets were pounded as investors severely punished companies for a lack of corporate restructuring.

What changed the balance was the Asian financial crisis and China's entry into the WTO. Politics in the South are becoming more volatile. Southeast Asia, after leading the region for years in low-cost labor, open investment policies, and business-minded governments, is losing many of its advantages to the North, especially to China. What's more, while the North is opening to the world economy, the South is turning inward. Malaysia and Indonesia have imposed capital controls, Thailand has largely halted its privatization plans, and the Philippines has disqualified itself from vital IMF funds because of a giant budget deficit.

Technology also plays a key role. More than 20% of the population of South Korea, Taiwan, and Hong Kong were wired to the Internet in 1999, compared with about 1% for the Philippines and 1.6% in Thailand. Taiwan, Korea, and Japan dominate computer and electronics production, as well as cell-phone technology.

Whether building factories in China, buying banks in South Korea or selling cars in Japan, multinationals that are betting on Asia's future are channeling more of their money to the large economies of the North. Losing out are the once-hot nations of the Southeast, still floundering from the 1997 economic crisis. The shift has forced Western companies and governments to redraw their economic maps of the region, making China, South Korea, and Japan the new epicenters of opportunity. Many believe the trend is creating a new Asian divide in which a wealthy, technology-savvy Northeast diverts investment from poorer, unstable Southeastern countries, which are left fighting each other for a shrinking pool of investment.

While the results of this shift are disadvantageous to some of the countries of Southeast Asia, it is expediting the development of both infrastructure and economy in Northeast Asia. As a consequence, resources, expertise, and

incentives are available to help close the “digital divide” that exists between the nations of Northeast Asia and the Americas’ North-Pacific region.

REFERENCES

- Abramowitz, Morton. *The State of Northeast Asia: An American Perspective*. Northeast Asia Survey, Brookings Center for Center for Northeast Asian Policy Studies, March 2001. Available at: <http://www.brook.edu/dybdocroot/fg/cnaps/papers/survey01.htm/>. Accessed 20 February 2002.
- Business Korea*. Winds of Change Are Better Late Than Never: North Korea’s New Game. 1 February 2001, pp. 8–12.
- Cho, Chung-sik. Leading ROK Firms Reconsider Their Plans to Invest in DPRK. *World News Connection*, U.S. Dept. of Commerce, 25 November 2002.
- Cossa, Ralph A. U.S. Asia Policy: Does an Alliance Based Strategy Still Make Sense? *Issues and Insights* No. 3-01 Pacific Forum CSIS, September 2001. Available at: http://www.csis.org/pacfor/issues_usasia_exec.htm/. Accessed 9 February 2002.
- Dorgan, Michael, Knight Ridder News Service, 10 November 2001.
- Frank, Robert. Asia’s Investment Spotlight Sweeps North: China, Japan and Korea Supplant the Southeast As Sites of Opportunity. *The Wall Street Journal*, 28 February 2001, p. A17.
- Frank, Robert. Asia Investors Lift Northern Exposure: Region’s Technological Advances, Southeastern Instability Drive Fund Shift. *The Asian Wall Street Journal*, 1 March 2001, p. 1.
- Glosserman, Brad F. Japan, the United States, and Northeast Asia After September 11. Testimony before the Subcommittee on East Asia and the Pacific, House Committee on International Relations, 15 November 2001.
- Goodby, James E. Brinkmanship Won’t Work with North Korea: Diplomacy in Northeast Asia. *International Herald Tribune*, 23 February 23, 2002, p. 8.
- Hamlin, Kevin. To the Rescue (China, Hong Kong and Privatization). *Institutional Investor, International Edition*, 1 January 2001, p. 76.
- Hwang, Jang-Jin. Prepare to Beam Up: Selection of Satellite Broadcaster to Revolutionize Telecom Industry. *Korea Now*, 9 February 2002. Available at: http://kn.koreaherald.co.kr/SITE/data/html_dir/2000/12/30/200012300015.asp/. Accessed 24 February 2002.

- Ko, Chu-Sok. Article Notes Slow Economic Boost in Rajin-Sonbong Economic Zone. *World News Connection*, U.S. Department of Commerce, 22 October 2001.
- Korea Trade and Investment*. Spreading a Little Sunshine. 3 April 2001.
- Lee, Chang-Jae. Northeast Asian Economic Cooperation: The Need For A New Approach. *NIRA Review*, autumn 2000, p. 5.
- Malaysian Business*. The Great Shift. World Reporter—Asia Intelligence Wire. 16 February 2001.
- Rowley, Anthony. *The Region's Last Economic Frontier: Northeast Asia Economically Neglected and Often Forgotten, This Subregion Is Ripe for Growth. Does It Need Its Own Development Bank?* Asian Development Bank, 2002. Available at: http://www.adb.org/Documents/Periodicals/ADB_Review/2001/vol33_4/econ_frontier.asp/.
- Shin, Yeon-Sung. *The Future of Regional Economic Cooperation in Northeast Asia: The ROK Perspective*. Tumen Secretariat, UNDP, 2001. Available at: <http://www.tradp.org/textonly/shin.htm/>. Accessed 25 February 2002.
- Takeuchi, Yukifumi. *IT Stage for Japan-South Korea Cooperation*. The Asahi Shimbun Asia Network. Annual Reports: Report 2001. Available at: http://www.asahi.com/english/asianet/report/eng_2001_07.html/
- Tumen Secretariat, UNDP. *Tumen River Area Development Programme: TRADP Institutional Framework*. 1998. Available at: <http://www.tradp.org/textonly/framework/ifrwrk.htm/>. Accessed 28 January 2002.
- World News Connection*. ROK Daily Notes Increased Activity in North Korea's Rajin-Sonbong Economic Zone. U.S. Department of Commerce, 29 October 2001.
- World News Connection*. DPRK Leader Reportedly Orders Development of Sinuiju as Special Economic Zone. U.S. Department of Commerce, 31 January 2001.