MAXIMIZING THE BENEFITS OF ELECTRONIC COMMERCE: KOREA’S INITIATIVES

1. This short paper has been prepared to describe developments in the area of Korea’s electronic commerce, considering the OECD Action Plan discussed in the OECD Ministerial level meeting of Ottawa on 7-9 October 1998. This paper, thus, mainly summarizes the current situation of electronic commerce and the tasks which Korea in this regard is faced with, finally identifying the initiatives that the Korean government has taken in order to maximize the benefits of electronic commerce.

2. Since the financial crisis occurred in 1997, the Korean government has tried, as an industrial restructuring scheme, to enhance competitiveness of firms. The introduction of electronic commerce is one of the key elements to accomplish this goal, owing to the belief that “electronic commerce may enhance the overall economic effectiveness, increase firms’ competitiveness, increase the efficiency of resource allocation, and in the long run, promote economic development.” Although these positive impacts are not verified completely in theory as well as in evidence, the Korean government has, and will continue to succeed by carrying out appropriate policy measures.

DEFINITION AND MEASUREMENT

Definition

3. The Ministry of Commerce, Industry and Energy (MOCIE) in Korea, which is in charge of building institutional policies related to electronic commerce, defines electronic commerce as follows: To exchange and utilize goods, services, and information through various electronic means by all economic parties including individuals, firms, and organizations. The narrow version of this definition is “to buy and sell goods and services via the Internet by consumers and firms,” and the broad version covers all economic activities such as production, procurement, distribution, advertising, marketing, and customer services by firms, consumers as well as government. The narrow definition is similar to that of the OECD, stated in DSTI/ICCP(98)15/ PAR2/REV1.

Measurement

4. Since there are no public statistical offices that would release official data on electronic commerce in Korea, the only available data come from either firms engaging in electronic commerce or surveys on electronic commerce conducted by the economic research institutions. For example, the Samsung Economic Research Institute (SERI) has predicted that the Internet-based business\(^1\) in Korea is expected to generate $1.7 billion in 2005. It is, however, generally accepted that business-to-business e-commerce comprises more than 80 % of total e-commerce, although data regarding B-to-B e-commerce are very limited.

5. According to the forecast made in 1997 by both DACOM and KAIT (Korea
Association on Information and Technology), business-to-consumer electronic commerce is estimated at some $5.3 million for 1997; it is predicted to reach $12.5 million and $29.1 million in 1998 and 1999, respectively. However, NCA (National Computerization Agency), which conducted a survey of 226 firms in B-to-C e-commerce in 1998, reported that B-to-C e-commerce amounted to $50 million in 1998, which is definitely above the prediction of DACOM and KAIT. Moreover, according to the survey conducted by NCA and Yonsei University in 1999, the estimated amount of B-to-C e-commerce from the 37 highly-ranked firms reaches $85 million in 1999 and is expected to increase to $346 million in 2000. This rough data indicate one certain thing: B-to-C e-commerce in Korea is expanding more rapidly than expected.

B-TO-C ELECTRONIC COMMERCE: CYBER MALL

6. The cyber mall, which commands a good business future and thus is currently in bloom, began in 1996 in Korea. At that time, the first cyber mall, the Lotte Internet Department Store, was opened and afterwards numerous cyber malls, which are mainly affiliated with shopping malls in the physical market, were established. Currently approximately 400 malls are in business but this number is relatively small, compared with that of the U.S., 450 thousand, and that of Japan, 7 thousand. Moreover, according to the survey conducted by KAIT in 1998, the current business situation of Korea’s cyber mall is still in an embryonic stage. The number of employee in 50% of total cyber malls is less than 10 and the amount of capital in 52.6% of total cyber malls is lower than $84,000. Still 58.3% of total malls began their business in 1998 so that they do not seem to have lots of business know-how in the cyber market. In spite of these poor business conditions, the future of the cyber mall is bright, considering the rapid increase of Internet users, continuously upgraded Internet infrastructure, and amendment of laws and regulations of government, which are discussed later.

B-TO-B ELECTRONIC COMMERCE

7. Korea’s B-to-B e-commerce began in 1987 when the Pohang Steel Company introduced a proprietary EDI system in ordinary business procedures. Although this system was not based on the Internet, it was rapidly adopted by many Korean firms, so that the number of companies that use this system amounted to 13,592 in 1997. However, as the spread of the Internet is gradually accelerated, most companies show the tendency to change a proprietary EDI system to a web-based system. The utilization of the Internet in the EDI system leads companies to use it more frequently and easily since a web-based system is cheaper to install and easier to access, compared to a proprietary one. Most companies believe that the introduction of an Internet-based EDI system may increase the effectiveness of internal business practices by changing business processes and organizations, and may enhance their competitiveness by creating new customers and markets. However, the positive effects expected by them will be gradually portrayed since it takes some time for this system to be taken advantage of completely.

8. As an initiative to promote B-to-B e-commerce, the Korean private firms has jointly launched a project named ELECTROPIA (a compound word of e-commerce and
utopia), whose main purpose is to overcome the bottleneck of ‘high cost and low efficiency’ of Korean firms. Thus, this project would like to establish an Internet-based system through which Korean firms may develop industrial parts for common use, procure necessary resources together, and establish a common logistics and distribution system. This project has a plan, first of all, to make all Korean firms interconnected, and secondly, to make them interconnected with foreign firms, via ELECTROPIA.

GOVERNMENT TO BUSINESS/CONSUMER ELECTRONIC COMMERCE

9. G-to-B/C e-commerce focuses on public sector projects, which are designed to employ an EDI or a CALS system. That kind of project began in the late 1980s, initiated by the Ministry of Trade and Industry, the former MOCIE, under the name of ‘Trade EDI.’ Afterwards, either an EDI or a CALS system was introduced in the areas of customs clearance, procurement, and even construction. Although these systems are based on a proprietary system, they seem to be gradually transformed into a non-proprietary system based on the Internet. In addition, the government has a plan to extend the coverage of these systems into defense, and to upgrade them for the private sector to access the government more conveniently for the purpose of business. For example, the government would like to make it a law for the government procurement to be conducted by e-commerce, and to construct an EDI system to make all the suppliers of government procurement to be interconnected.

INITIATIVES OF THE KOREAN GOVERNMENT

10. The government’s initiatives to reap the benefits of electronic commerce are currently being carried out in the following directions: 1) to improve various laws and regulations; 2) to create demand to boost e-commerce situated in an embryonic stage; 3) to establish infrastructure for e-commerce; 4) to strengthen international cooperation in the area of e-commerce.

11. Two basic laws to provide the legal foundation of e-commerce have been in effect since July 1 1999. The first law is ‘The Electronic Transaction Act,’ whose main purpose is to give legal validity to electronic documentation as well as electronic signature. The characteristic of this law is to let e-commerce be supported and promoted by the function of market and competition, and by the leadership of the private sector. This law also assures the protection of consumers’ information as well as the security of e-commerce. The other is ‘The Digital Signature Act,’ which provides the process through which an digital signature system can be implemented. In addition, the government has a plan to revise some articles of the established laws that unintentionally hinder the development of e-commerce.

12. Demand creation is mainly focused on B-to-B e-commerce, as it has not been well developed in spite of its importance. The government would like to establish a mechanism based on e-commerce to persuade horizontal cooperation between large and small and medium enterprises(SMEs). For this purpose, the government has a plan to introduce CALS/EC system in the few major industrial sectors including electronics,
automobile, ship-building, steel, and textiles. When this system is successfully established, the positive effects such as joint procurement, joint distribution, and parts standardization will naturally follow. The building of infrastructure is currently carried out in the following directions: 1) to promote the development of electronic commerce technology 2) to expand e-commerce standardization; 3) to upgrade Internet infrastructure for easy and rapid Internet access. In addition, ‘Electronic Commerce Resource Centers’ are established to support training, technological advising and consulting services for the SMEs.

13. To increase the utilization of e-commerce by small and medium-sized firms, the government has held and will continue to hold nationwide conferences explaining the benefits of e-commerce. Cyber Mall Award program is initiated to confer the awards to the superior Internet cyber malls, giving them the permission to display the certified logo of their quality, and thus, providing people with information about the cyber market. To promote international cooperation, the government continues to take participation in multilateral talks regarding e-commerce, such as those in OECD, WTO and APEC, as well as in bilateral talks with many countries. Korea sets up the joint statements on electronic commerce with the Australia, New Zealand and the U.S.. With Japan, the cooperation channel on electronic commerce between the private sectors is established to promote joint projects.

1 Although SERI does not explain the term of Internet-based business, it seems to mean the total Internet business including B-to-C and B-to-B e-commerce.
2 According to the Korea Internet Information Center, the number of Internet users in Korea has almost exploded. In 1994, the number was less than 150 thousand but it has increased by more than 200 % each year, so that it is expected to amount 5 million in 1999.