



# en breve



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## KOREA'S EXPERIENCE IN PROMOTING E-BUSINESS ADOPTION AMONG MICRO AND SMALL ENTERPRISES

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### Introduction

In Korea, around 3.1 million small enterprises (99.2% of the total) operate with less than 50 employees. Micro & small businesses (MSBs), however, have lagged well behind in the adoption of IT, largely due to insufficient financial, human and technological resources. To address this, Korea has taken bold measures to help MSBs exploit the potential of ICT as a driver of productivity and growth.

The Knowledge Management Team of the World Bank's Latin America and Caribbean Region is spearheading an initiative to help public and private organizations in Latin America accelerate the rate of e-business adoption among MSBs. A key element of this program is to learn from those who have achieved results in this arena. Korea's experience in promoting e-business adoption among Micro and Small Businesses provides valuable lessons in terms of publicly

supported strategies, programs and institutional frameworks. It has been evaluated by the Office for Government Policy Coordination and identified as one of the best initiatives on e-Development and was also nominated as one of the finalists in the Stockholm Challenge 2002, a world-renowned award for this type of project.

### Why e-business ?

Electronic business has emerged as a new form of economic activity based on the removal of the constraints of time and distance which have accompanied the advent and increasing accessibility of the Internet. As a result, many countries around the world have drawn up frameworks for the promotion of e-business development. Among the leading nations, e-business adoption is emerging as a key driver of national competitiveness.

### What is e-business?

E-business is the progressive process of investing in information and communications technologies (ICT); applying them to transform business processes like market research, production, finance and management; and transacting business with other businesses, governments and households via online networks. A variety of impact evaluations show that the e-business development process boosts small business knowledge, market outreach and productivity, thus enabling them to compete more effectively in local and international markets and realize their growth potential.

Primary constraints to e-business development by small business include lack of awareness about e-business benefits, business models and success cases; lack of e-business know-how and technical support to integrate and manage e-business systems and a shortage of financing for e-business innovation. Secondary barriers to e-business adoption include inadequate network infrastructure services, the perceived, or real, insecurity of electronic transactions, the high level of complexity of mainstream ICT systems and applications.

The e-business concept involves several components. "E-commerce" is defined as electronic transactions between a business and a final consumer (e.g. books, clothes). "E-business" (or B2B) uses transactions between suppliers of raw materials or intermediate goods and services as part of the supply chain. "Government-2-business" (G2B) involves procurement, regulatory compliance transactions and support services between government and business.

Korea's experience demonstrates this potential. Taking advantage of its advanced information infrastructure, the size of the e-business market increased from 47.9 billion dollars in 2000 to over 195.8 billion dollars in 2003 (see Table 1).

Year	2000	2001	2002	2003
	US\$million			
B2B	44,583	90,833	129,167	172,378
B2C	583	2,167	4,167	5,079
B2B + B2C	44,166	93,000	133,134	177,457
G2B	-	5,833	14,166	18,028
Others	3,747	347	357	368
Total	47,913	99,180	147,657	195,853

(Source: National Statistical Office)

The number of internet users, one of the key indices of national e-development, was 29.22 million as of the end of year 2003, equivalent to an Internet penetration<sup>1</sup> ratio of 64.5%. Internet stock trading stands at 83.6% of total trades, representing 5.6 million online accounts as of June, 2003.

As shown in the Table 2, the rate of e-commerce as a percentage of total commercial transaction has also been continually increasing.

	Total Commercial Transaction (A)	e-Business Transaction(B)	e-Business Portion(B/A)
	US\$Trillion		
2000	1,058	48	4.5%
2001	1,090	99	9.1%
2002	1,155	148	12.8%
2003	1,188	196	16.5%

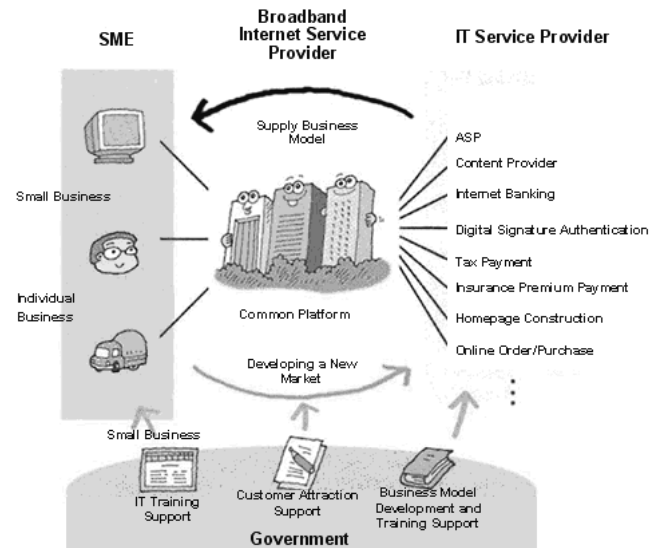
## E-business for small business in Korea

While Korean companies are accelerating their efforts to facilitate e-business, supported by innovative industrial policies and programs, most of the companies making significant investments in IT such as Internet-based e-business systems and ERP (Enterprise Resource Planning) have been large and medium-sized.

Small enterprises, by contrast, often lag far behind large enterprises in IT investment and may not appreciate the strategic importance or utility of IT, or fully benefit from it. However, these enterprises are critical to the economy as they play important roles at both ends of the supply chain.

Seeking to reduce the barrier to entry caused by the need for high initial investments, the Korean Government has launched a project for small businesses focusing on the role of application service providers (ASPs) as IT enablers (see Figure 1). This aims to provide cheaper and more convenient software solutions, to help overcome shortages of IT specialists in small firms. The initiative targets the 3 million small (5-49 employees) and micro businesses (1-4 employees) that account for 99% of all businesses.

**Figure 1 - ASP-based Model**



To develop, supply and support such solutions, five consortia were formed, consisting primarily of major telecommunication carriers, portal service providers, contents providers and, solution providers.

Through the efforts of the government and the ASP industry consortia, the number of subscribing small businesses reached approximately 180,000 as of March 2004 (see Figure 2). However, there have been a considerable number of MSBs who have terminated their participation in the project, lacking the understanding of the significance of e-business as well as the knowledge on how to utilize IT solutions efficiently.

### Awareness and training

To address this problem, the Government focused on raising awareness, often regarded as one of the most important fundamentals in e-development. The Korean government has been trying to provide a foundation of educational support to accelerate e-business diffusion. In order to meet the demands and unique business environment faced by small businesses, various training courses on networks, hardware, and software, ranging from computer basics to solution utilization, are offered. Through such courses, provided as either on-site training or collective training, small businesses can adopt e-development themselves without professional knowledge or expertise.

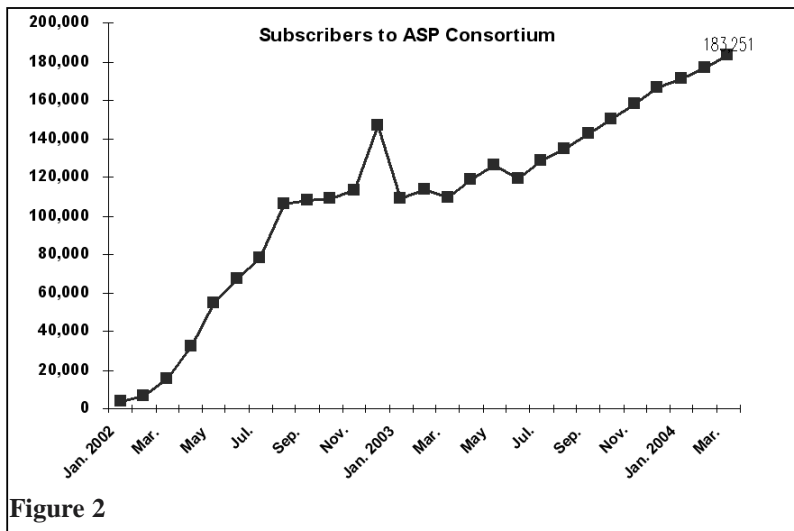


Figure 2

A number of other human resource development programs to develop e-business know-how have been implemented. With the demand for e-business professionals expected to exceed 290,000 by 2005, a comprehensive survey on the supply and demand for e-business manpower was conducted and used as a baseline. E-business professionals include not only those with expertise in IT and business administration, but also those with expertise in ISP (Information Strategy Planning), BPR (Business Process Reengineering), SCM (Supply Chain Management) and, CRM (Customer Relationship Management). To develop this cadre, the government supported the establishment of an industry/academia consortium in 2002 that is responsible for developing and offering graduate school courses on e-business.

### Public policy for e-business

The Korean government began to implement a variety of initiatives and policies to promote e-business at the government level based on the Comprehensive Policies for e-Commerce Development adopted in February 2000. The national strategy for promoting e-business (the e-Business Initiative in Korea) was established in April 2001 to build an e-business network across industries, strengthen the participation of the public sector, expand the e-business operation base, and globalize the scope of e-business. Under these national level strategies and policies, the government has explicitly promoted e-business as a means to realize structural innovation and strengthen Korea's corporate competitive edge. To this end, applicable laws and regulations including those for electronic approval processes, e-trade, and consumer protection have been continually fine-tuned and standardized as necessary. The government has also systematically expanded the necessary infrastructure by promoting the development of essential technologies, recruiting professional human resources, and expanding the high-speed information network. These actions - taken as a whole, have fostered a strong foundation for e-business across the national economy.

### E-government for business

In the past, in order to participate in public procurement and export-import activity, businesses had to visit several different government offices and manually submit a considerable number of documents, a process which caused inconvenience and wasted time and money. Through the establishment of the e-procurement single window and computerization of export-import cargo services (PORT-MIS), online patenting services, and so on, business-related procurement processes now have reduced transaction costs and greater transparency.

With the launch of the National Comprehensive Procurement System ([www.g2b.go.kr](http://www.g2b.go.kr)), businesses can easily get the bidding information for all public organizations through a visit to the website. In addition, businesses can now participate in all bidding processes with a single registration rather than making registrations in each organization. The entire procurement – from bidding to payment – procedure being online, the government and businesses do not have to meet face-to-face any longer. Through the standardization of the e-document exchange system and information sharing in export-import cargo-related offices such as the Customs Office, the Immigration Bureau, or Quarantines, it is now possible to process export-import cargo services with just one notification. With the establishment of KIPOnet, the whole process of patent related administrative services, from application to publishing and issuance, is entirely digital.

In addition, the government provides online services, not limited to MSBs, such as business registration and permit application for several industries, online export-import processing, and promotional sites for international trade information.

### Overall conclusions

A number of success factors were identified in this initiative:

**Technical Factors:** In general, small businesses have limited access to IT experts and minimal experience in ICT projects. By absorbing much of the associated risk, the Korean government provided a way to reduce the amount of initial investment required in adopting the technology. On a larger scale, the government also provided the facilitating mechanism by deploying a nationwide high-speed information network

**Organizational Factors:** Small businesses are likely to lack standardized and systematic work processes. By developing and distributing information systems tailored by industry and using established business models, considerable economies of scale were possible.

**Awareness Factors:** Small businesses do not always recognize the necessity of e-business or know how to get started, even if they do. The Government provided training programs to raise awareness and publicize best practices and national policies.

Looking forward, a number of recommendations for policy makers also emerged:

**Ministerial cooperation:** The ASP-based e-business project involves cooperation between the Ministry of Information and Communication and Small and Medium Business Administration. However, for more efficient and effective implementation of the project, related ministries and organizations need to share the roadmap on nation-wide e-development and promote mutual cooperation for better synergies.

**The public sector as convener and early adopter:** Avoiding ministerial competition is critical to diffuse high quality e-business. The government's role should include provision for collaborative arrangements among the public sector agencies involving e-business and adopt e-business in the public sector for e-government and increased transparency.

**Long-term and effective support policies:** Constant analysis of project performance is necessary. Typically, while there will be a number of ICT projects and policies mapped out every year, there will be little feedback, without effective monitoring and evaluation systems, on how the e-business environment has improved in individual businesses, sectors and at the national level.

**Establishment of standards:** Some specialized technologies for e-business need to be standardized, and the government must play an important facilitating role. In Korea this includes: the e-business framework, development of business models, e-catalog, e-document, product models and, e-payment security.

**Separate policies for small and medium businesses:** Government support for industries should be differentiated according to the size and industry type.

**Adopting technological innovation:** Advances in technology and associated reductions in cost are important to accelerate e-business adoption. The use of mobile communication and WiFi are two examples. However, technology needs to be accompanied by suitably scaled efforts in HR training, strengthening of on-site education, increased opportunities for overseas training, an empowered R&D environment, and a developed legal and institutional framework for manpower training, etc.

This initiative highlights the advantages which continue to accrue to Korea for taking a strategic approach to the development of the knowledge economy. This includes identifying the key role that small and medium-enterprises play in the supply chain and the importance of closing the gaps which exist in their access and application of IT.

By focusing on nurturing an enabling environment and reducing the risk associated with entry into e-business, the Government and the ASP-based applications and e-business skills development have provided significant returns. Through strategic alliances of application software developers and telecommunication service providers, small and medium-sized enterprises have gained an easy-to-use and maintenance free bundle of IT resources needed to carry out e-business at low cost.

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## Notes

<sup>1</sup>Internet penetration ratio = Number of internet user / total population x 100

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