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CASE STUDYOF SAMSUNG- TESCO, KOREA   
Korea Institute For International Economic Policy

1. Introduction

1) Description of Retail Business in Korea   
Retail business is emerging as one of the most promising businesses in Korea due to what Samsung-Tesco calls a ‘ powershift’ from manufacturing to distribution. Indeed, it is especially true in Korea; while the retail business of U. S. and Japan took 32% of GDP on average, that of Korea’s took only 21% in year 2000. Samsung-Tesco conservatively forecasts that the average growth of retail business, between 2000 and 2005, would be 8. 6%. Currently, the ‘ big five’—Homeplus (Samsung-Tesco), E-Mart, Carrefour, Magnet, Walmart— consists 52% of the market. As small retail businesses are increasingly being absorbed to big retailers, department store, and supermarket, the competition among the ‘ big five’ is becoming fierce to take advantage of high growth market, which also possesses the strategic advantage of a spearhead for entering Chinese market.

2) This Case Study and the Timeframe   
This case study describes the implementation of new economy paradigm, which took place during and after the merger of Samsung Corporation and Tesco PLC. Although the major target of the merger was not exactly on uptaking new economy paradigm, the merger process has played critical role in implementing new economy paradigm in Samsung-Tesco. The case study timeframe stretches from early 1994 to the present while many of the important issues in this case unfolded from 1997 to present. Information in this case was gathered through aninterviewand questionnaires along with direct observations.   
3) Background   
In March 1994, after separating out from Samsung group (chaebol), Samsung Corporation entered into retail business. There was little doubt that Samsung Corporation would be very competitive because of its well-recognized management skills and capital. However, when it opened its first three retail stores (Homeplus Taegu, Samsung Plaza Bundang, Samsung Plaza Seoul) in 1997, the financial crisis broke out. Plummeting consumer confidence and viciously high cost of financing inevitably placed Samsung Corporation into financial status of literally a step away from bankruptcy; accumulated loss during 1998 was KRW 249 billion (approximately US$200 million)1. To overcome this unprecedented difficulty, Samsung Corporation began to restructure its business and downsized the organization while searching 1 Calculated in KRW 1, 200 per US$. It should be much higher if it was calculated by exchange rate of that time (Approximately KRW 1, 800 per US$). for the breakthrough strategy. Recognizing that retail business is too attractive to give up, Samsung Corporation decided to seek for foreign investment2. At the same time, after successfully establishing its business in Thailand, Tesco PLC was also looking for partner that could provide strong local background as well as capability of creating synergy for Tesco’s regional network. As the need of both parties met, Samsung- Tesco was established in May 1, 1999. Through the merger, and initial investment of US$ 220 million from Tesco PLC, Samsung-Tesco was able to clear out all debts and rehire all of 1, 137 workers who were laid off during 1998. Strategy and Planning Division of now Samsung-Tesco evaluates the merger a success for two reasons.

First advantage was financial.

The merger not only saved Samsung-Tesco from bankruptcy but also guaranteed Samsung- Tesco a subsequent investment of $170 million (KRW200 billion) to dominate the market. Second advantage was access to the advanced management skills and ITtechnologyto compete with other world class rivals such as Wal-mart, Carrefour, Costco, etc. shows visible improvements of Samsung-Tesco after the merger.   
Trend of Sales Growth Rate and the Market Rank of Samsung-Tesco   
1999 2000 2001\*   
Sales US$363 milllion   
(KRW 435 billion)   
US$516 million   
(KRW619 billion)   
US$1. 2 billion   
(KRW 1. 4 trillion)   
Growth Rate - 42. 3% 126. 1%   
Market Rank 5th 4th 3rd\*\*   
\* Estimated   
\*\* First and second rankers are E-Mart and Carrefour   
While the ‘ catching up’ of Samsung-Tesco since the merger in Korean retail market is impressive, these figures shown in are not the sole factor for increased attention that Samsung-Tesco receive from the media, the competitors, and the business analysts. In fact, Samsung-Tesco’s critical success factor lied in its effective management of the new trend that influenced every industrial nations including Korea—the new economy paradigm.

2. New Economy Narratives   
As it was shown in the case of U. S., new economy benefits cannot be fully exploited unless it is supported by infrastructures including human resources capabilities and organizational (socio-cultural) capacity. And it is obvious that, depending on the stages of the development, each recipient of new economy paradigm (business, civil society, government agency etc.) will have different degrees of impact and will show different reactions to the new economy paradigm.

Samsung-Tesco’s situation was unique in that it had already had IT hardware prepared but it had to adopt global standard IT hardware as well as software (infrastructures such as readiness of workers to adopt new system andculture) for heightened competitiveness. If we

2 Since the financial crisis of 1997, Korean government actively promoted foreign investments and deregulated related laws. It would have been much difficult or impossible if the regulation that existed before the financial crisis still existed. define3 new economy paradigm narrowly and limit to just IT hardware, Samsung Corporation had already established its own IT system independently. The IT industry of Korea was quite competitive and the very nature of retail business required intensive IT system throughout its entire value chain. However, after the merger, the requirements on the system have expanded to cover global network, as well as future expansion of logistics system. Samsung Corporation’s former system did not meet the requirements of global standards although it worked well on the domestic basis. Samsung-Tesco faced dilemma of either just modifying the former system or changing the entire system to Lotus system that has been used in Thailand4. The Lotus system was more desirable for it was a global standard and flexible enough to take into account a rapid expansion; the former system was consistent with Korean currency, language, practices, and most importantly, people were used to it. The former system was operated in Windows system while the Lotus system was operated in DOS system5.

Samsung-Tesco decided to partly adopt Lotus system: for retail system, Samsung-Tesco fully adopted Lotus system, and forfinance, Samsung-Tesco adopted Oracle financial. However, for personnel management and groupware, Samsung-Tesco decided to stay with the former system. The Lotus system was chosen for retail system—the backbone of the entire value chain in retail business—because of following reasons.

First, the former system does not reflect characteristics of multiple stores network—the multiple stores network requires simplification, standardization, and specification of the system. This problem will inevitably be intensified as Samsung-Tesco expands its business.

Second, it is clear that, in the near future, global supply chain system will be developed and it will require global standard that the former system is lacking of6. It is highly probable that future competitiveness of Samsung- Tesco will be built around its global network; one of Samsung-Tesco’s tough competitor— Wal-mart—already introduced its global EDI system.

Third and the most important reason was reliability of the Lotus system. Because the Lotus system has already proven its performance in practice, Samsung-Tesco did not have to risk reliability of the system in the situation where the competition is already intensifying. The principle in adopting the Lotus system in Samsung-Tesco was glocalization (globalization+ localization), which is one of the business motto introduced by Seung Han Lee, the CEO of Samsung-Tesco.

Glocalization basically pursues, as far as possible, the global standard while recognizing that global standard is not the panacea and therefore businessenvironmentof Korea should also be respected. The transition process took three stages as shown in

. Note that it took almost one year (10 months) to adopt new IT system.   
3 In this case study we define new economy as economic model which any networked two-way information and datacommunicationdevices facilitate better decision making of the organization and lead to higher performance.   
4 Samsung-Tesco has chosen the Lotus Thailand system because the Thai environment was most similar to that   
of Korea’s among Tesco’s global network.   
5 It does not necessarily mean that DOS system is global standard.   
6 Samsung-Tesco plans to increase global sourcing by 4% of total sales in 2002, 6% in 2003, 8% in 2004 and   
11% in 2005   
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Stages of IT System Transition   
Stages Content   
1. Survey   
’99. 7– 12   
• 30 managers from product/operation/accounting/IT were sent to   
Thailand to review the Lotus system.   
• Korean version of Lotus was established and Korean manual was   
developed.   
2. Education   
’99. 12–’00. 2   
• 60 trainers were sent to Thailand to experience actual operation of   
the system   
3. Adoption   
’00. 1-5   
• Change management project was launched to minimize the   
friction from the transition   
Samsung-Tesco’s case implies some insights for the nature of new economy paradigm.

First, the merger enabled Samsung-Tesco to tap into networked information resources that Tesco   
PLC has developed around the global network. Samsung-Tesco, without taking risk of   
developing and testing IT system in the battlefield (competitive retail market of Korea),   
adopted global standard IT system along with related experiences and business know-hows   
that were developed in Thailand. It is consistent with the existing theory that drafting in   
behind the global technology leaders or becoming part of the global technology leaders can be   
more beneficial than starting from the scratch. Second, as international operability of the   
system gains its importance, so is the importance of localization. This paradoxical statement   
implies that, to garner the maximum network benefits, the one-way flow of information will   
not be enough. While pursuing global standard, there should be a continued supply (feedback)   
of local information to increase the network effect. If Thailand’s experiences (which had   
similar environment to that of Korea’s) were not accumulated in the knowledge pool of   
Tesco, Samsung-Tesco would not have benefited as much from the network. Third   
implication is the importance of infrastructure, especially the human resources infrastructure.   
Samsung-Tesco accredited that IT workforces who were trained in government institutions   
and hired by Samsung-Tesco have played an important role in adopting and adjusting the   
Lotus system to Korean environment. Samsung-Tesco was very satisfied with their skills and   
appreciated the effort made by the Korean government. However, as will be described later,   
Samsung-Tesco emphasized post-hiring education and corporate culture as more important   
aspect. Samsung-Tesco also noted that quality of non-IT workforces is important as well7. As   
the boundary of management has increased and routine works were done by IT system, the   
quality and impact of decision making by workers (IT and non-IT) became much more   
important than before.   
3. New Economy and Policy   
1) Macroeconomic Policy   
Macroeconomic environment of Korea played a unique role in promoting new economy. The   
financial crisis of 1997 had both negative and positive impacts on Korea. Although the crisis   
led many Korean companies to go bankrupt, it also drove out many inefficient companies out   
7 They asserted that, at least in retail business, there is no distinction between IT and non-IT because so many   
decision making processes are dependent on IT technology.   
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of business and forced the companies to be competitive to survive in harsh macroeconomic   
conditions. Had the macroeconomic conditions been favorable, Samsung Corporation would   
never have considered a merger with Tesco PLC and the result would not have been as good   
as now. Strategy and Planning department of Samsung-Tesco pointed out that while favorable   
macroeconomic condition is important and much more preferred, it is also the case that the   
unfavorable macroeconomic condition sometimes boosts restructuring and creates an   
environment for what Samsung-Tesco calls a ‘ step change’8. When the organization does not   
have capability of conducting ‘ creative destruction’, unfavorable macroeconomic conditions   
could stimulate the innovation process, but it should not be (and cannot be) deliberately   
created for its risk is too big.   
2) Services Infrastructures   
Service infrastructures such as physical distribution network, communication network   
indicates national competitiveness and plays critical role in determining the success orfailure   
of the businesses. Samsung-Tesco, while satisfied with the communication infrastructure of   
Korea, evaluates Korea’s logistics network as insufficient. According to Samsung-Tesco, the   
ratio of logistics cost to sales was 12. 9%, which is far behind that of U. S. (9. 0%), Japan   
(6. 4%), and Great Britain (4. 7%). However, Samsung-Tesco commented that the Korean   
government’s current effort9 to enhance logistics network in Korea will have positive effects   
and show improvement in the near future.   
3) Business Environments   
Despite the continuous deregulation efforts of the government after the financial crisis of   
1997, there still is more room to be filled. Samsung-Tesco finds following problem with   
government regulations on business. Samsung-Tesco focuses on three core businesses:   
Homeplus Hypermarket, Homeplus InternetShopping mall, Homeplus Retail Banking. In   
fact, this was basic strategy of Tesco’s global business. While other two businesses were   
successfully launched, Homplus Retail Banking was not permitted by the Korean government.   
However, Samsung-Tesco was optimistic about the financial liberalization of Korea and   
expects to launch Retail Banking unit in a near future10.   
4) Human Resources Capability   
According to Samsung-Tesco, human resources management has two different aspects. While   
universities and institutions play important role in supplying qualified human resources, the   
maintenance and improving of human resources should be facilitated by Samsung-Tesco (or   
other organizations such as government agency, private firms, etc). Samsung-Tesco   
emphasized its role in further developing human resources after hiring. The basicphilosophy   
of its training programs such as English learning programs, computer classes, capability   
8 A breakthrough, or innovative change as opposed to incremental change.   
9 Currently there are six logistics centers in Korea. But it is expected to be twenty-nine by year 2002   
10 The Korean government’s hesitance was quite natural after facing severe financial crisis   
due to lack of supervision on financial sector.   
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developing programs were to establish glocalized corporate culture that unifies Tesco PLC   
and Samsung Corporation together.   
Samsung-Tesco faced difficulties in 1999, right after the merger. The morale of the   
employees was quite low due to cultural difference caused by merger, language barriers, and   
communication difficluties. The major conflict was that employees perceived the new   
management process of Samsung-Tesco to be too rational and lacking humanity. To make   
reconciliation of the conflict between Tesco PLC’s corporate culture and Samsung   
Corporation’s, Shinbaration Task Forces was launched by the CEO, Seung Han Lee.   
Shinbaration is a concept that consist of ‘ Shinbaram’ and rationality. Shinbaram is emotional   
reaction that allows people to achieve more than their limit. This very Korean culture is   
somewhat too emotional and lacks rationality, which Tesco PLC has been emphasizing in   
management. The object of Shinbaration Campaign was to encourage teamwork and create   
working environment where employees can surpass their limit while not letting it develops to   
cronyism.   
While the Shinbaration Campaign is still on progress, Samsung-Tesco’s personnel   
management team finds that there are some signs of two different business cultures getting   
balanced out. Personnel management team added that the next step is to develop a philosophy   
that binds two different cultures together.   
What Samsung-Tesco emphasized in human resource capability development was wellbalanced   
management of different cultures that cannot be evaluated as which one is good or   
bad. Samsung-Tesco’s case implied that, in developing human resources capability under new   
economy paradigm, the cultural glocalization concept should be emphasized as a basis for   
functional skill training programs (e. g. English, Computer skills, etc.)   
4. Summing-up and Looking Forward   
To Samsung-Tesco, the new economy meant more than just adopting IT hardware. It is   
relatively easy to adopt just the new hardware and train employees the new skills that are   
required by new technology. The harder part is the balancing of different culture (in this case,   
British and Korean) to create glocalized culture of management. As new economy thrives on   
network and the network connects different regions and cultures, the balanced (globalized but   
also localized) mindset of the workers plays critical role in utilizing the benefits of global   
network.   
Samsung-Tesco plans to anchor on Shinbaration Campaign until they could concretely define   
Samsung-Tesco culture (unique but conforms to global standard) because it is philosophy and   
culture, rather than functional adoption of new economy technology, that decides the success   
or failure in adopting new economy paradigm.   
Although Samsung-Tesco recognizes current reform efforts of the government and benefited   
from it, there exists room for improvements. Samsung-Tesco recommended following   
suggestions. First, while the second stage foreign exchange liberalization act of 2001 allowed   
repatriation of proceeds if the management desires, Samsung-Tesco still feels that the process   
1-7 3-   
was still too complicated. Second, public-private sector partnership in developing logistics   
network in Korea will be profitable for both parties. Third, to develop global supply chain, the   
customs clearance procedures should be enhanced to shorten the lead-time.   
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MINI-CASE STUDY: MALAYSIA?   
Karim Raslan   
Kuala Lumpur-based Lawyer and Regionally Syndicated Columnist   
Short Overview of Client:   
The client is a Malaysia-based, privately owned trading and distribution company involved in   
the import and export of industrial products. Owned and controlled by a what is commonly   
dubbed an ‘ overseas Chinesefamily’, the firm has thirty employees and offices in three   
countries (Singapore, Hong Kong and Malaysia). The firm’s turnover is approximately   
US$12. 5 million per annum. Founded in 1945, the business was acquired by the present   
owners over 35 years ago.   
‘ New Economy’ Narrative:   
By their own admission the client firm is conservatively run and extremely cautious. However   
it became clear in 1998 that the client could cut costs by using information technology (IT)   
especially vis-à-vis international communication. Initiating the move themselves they   
invested in the networking facilities in order to remain competitive.   
There is no doubt that the reduced costs have been a direct benefit to the bottom line.   
Furthermore the accelerated operation times has reduced inventory costs. However the   
internet has not resulted in an expansion of either the customer or supplier base. The clients   
stressed that in the industrial supply business the element of personal relationship remains   
crucial: “ we want to know who we’re dealing with. There has to be a ‘ face to face’ meeting   
before we can proceed to business.” Clients were adamant that a good track record of service,   
reliability and a strong market reputation helped them maintain their competitive edge. They   
doubted that a web-site—without the personal touch—could help them.   
Clients explained that in their business, customers often had very specific, customised orders   
and requests. For example a customer might order a semi-finished product such as brass rod.   
Even if the order volume is low, in the event of a hitch, clients were expected to visit the   
workplace and rectify the problem. Clients understood that by maintaining close ties and   
regular site-visits that they would be able to track customer preferences as   
well as head-off any future problems.   
In the case of the brass rods, clients would be expected to examine the problem and make an   
immediate assessment of the damage and means of rectification. “ We have to know our   
customers inside-out, the processes they use, the workers, their skill-level and the machinery   
in situ”. Having made the investment in time and effort they say ‘ there is a lot of give and   
take in the business relationship: we work together’.   
? This case study was edited at the request of the Government of Malaysia   
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Our clients—especially new accounts—refuse to negotiate over the internet. “ Discussing   
terms over the telephone and via fax and email somehow undermines the legitimacy of the   
company and the perception of our seriousness. It’s just too impersonal. We are not papershufflers.   
We have to meet clients face-to-face to give them the comfort.” As a consequence   
clients were very skeptical of the likely success of B2B exchanges in their business.   
New Economy and policy:   
Since most of the new technology and software is imported and/or assembled with foreign   
inputs the pricing tends to follow the movement of the US$. Exchange rate volatility can   
impact on whether or not clients chose to implement a new round of investment in   
technology. Of course, when as now industrial activity appears to be slowing, clients put off   
investments in new technology.   
Services infrastructures, policy and environment:   
Telephone lines within Malaysia are according to clients always congested and the Internet   
Service Providers (ISP) are insufficient. “ When it fails, you’re dead”. They also voiced   
concerns about occasional fluctuations in electricity supply and the detrimental impact on   
stored data, saying “ often we make non-electronic duplicates of data which is expensive and   
time-consuming”.   
But clients were much more unhappy with what they saw as the software suppliers’ attempts   
to generate more sales by introducing software with only marginal increases in terms of   
efficiency and costs. As they say “ there should be to be tax write-off provisions.” They were   
unhappy about the way the hardware and software suppliers are determined to gouge buyers.   
“ We are not wealthy multinationals and yet we are expected to pay exorbitant costs to protect   
our data base. Large companies have entire teams manning their systems, we can’t afford   
that.”   
Furthermore with the advent of email, clients have discovered that their “ extremely expensive   
data” is also vulnerable to external viruses. “ In the past faxes and telephone calls wouldn’t   
corrupt our data. This has meant a further duplication of effort as emails are often backed up   
by faxes This is a ‘ dead cost’ in our eyes.” Clients felt that instead of spending the time   
‘ mining the data’ for value, valuable management time was devoted to monitoring the data   
systems and their protection from external corruption and viruses.   
When asked about financial intermediaries and distribution, clients were of the view that   
efficiencies depended on the quality of management and supervision. “ We are concerned   
about the calibre of the people inputting data and supervising the process.” Given the amount   
of information now made available through the internet, they were also worried about security   
provisions.   
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Micro business and labour environment including rule of law:   
Clients felt that the regulatory environment created price controls. They doubted the openness   
of the markets, the transparency of price-setting mechanisms. {…} As far as clients were   
concerned there were, at least in late 1999 and early 2000 very high expectations about the   
internet and its ability to cut business costs. However, they have found that many apparent   
advantages have not been applicable in their service-driven business: “ we still have to deal   
with our clients the old way, by calling them up and seeing them on site. That’s what they like   
and want.”   
Clients felt that clearer overall policy management would assist them in their business.   
Improvements in physical infrastructure were important but often the soft-infrastructure had   
been neglected. They were not aware of any cyber laws but professed not to have followed the   
developments in this field in any way.   
Human resource capability:   
Clients felt that the best manpower (foreign-trained) was cherry-picked by the MNCs. “ We   
are left with the second tier.” Moreover they were consider that there was a major difference   
between the skilled and unskilled and that the pool of IT-trained workers was not large   
enough: “ there just aren’t enough people to go around.” As a result it was often difficult to   
explore new ways of doing business and evolving new products and services. Clients   
conceded that the government was investing time and energy in upgrading worker skills: but   
as they said in exasperation, “ it’s still not enough. Though we do see a much more IT savvy   
younger generation of workers emerging.”   
Clients also observed another new development that troubled them. The language on the net is   
a new challenge. ” At first we thought is was a question of whether or not we’ll be using   
Bahasa Malaysia, Mandarin or English. However now we see the emergence of a new netbased   
language that uses abbreviations and icons. This is fine for people who are familiar with   
it. Most of our clients and the operational people on the factory line don’t have the time or   
experience to learn what these icons mean. They want solutions and answers not more   
confusion.”   
Conclusion and Policy suggestions:   
Clients were skeptical—especially after the deflation of the internet bubble of the value of   
new technologies—to their business. “ We still have to service clients the old way.” Whilst   
they acknowledged they were cautious, they were relieved that they didn’t over invest in new   
software when everyone thought it was the thing to do: “ that saved us a ton ofmoney, since   
most of the software and hardware is obsolete within six months.” Clients considered   
education and human resource development as the key to improving the business   
environment.   
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MINI-CASE STUDY: PERU   
Christian Rodríguez Ramos   
Peruvian Institute For Electronic Commerce   
1. Short Overview of the Client   
The Peruvian Institute for Electronic Commerce (IPCE in Spanish) is a unique non-profit   
organization based in Lima, Peru. IPCE’s mission is to promote and to spread the knowledge   
on topics like electronic commerce (e-commerce) and e-business, counting with the   
commitment from the private sector as well as the Government. Besides, IPCE’s contribution   
will improve the performance of local companies from using the latest technologies for being   
more competitive and recommending the use of both national and international best practices,   
under the appropriate legal framework.   
Many companies and governmental agencies are associated to IPCE and take decisions   
through a representative Board of Directors. These companies are leaders in their respective   
businesses, mostly Information and Communication Technologies (ICTs), while the   
Government Agencies are the governmental institutions most compromised with the use and   
spread of ICT. With more than two years of existence, IPCE has positioned itself as an   
organization in charge of recollecting and analyzing the information regarding the growing ecommerce   
sector in the country, because there weren’t any concrete statistics about the real   
situation of e-commerce in Peru. IPCE currently has 15 employees distributed on four areas:   
management, research and projects, communications and legal affairs.   
2. “ New Economy” Narrative   
As an organization completely dedicated to promote and analyze the e-commerce and ebusiness   
industry in Peru, the new economy forces influence directly over this institute, since   
it was created precisely around these forces and the growth perspective they create. The   
Internet is IPCE’s field of analysis and at the same time, it’s IPCE’s main tool to achieve its   
goals. The IPCE is an intensive user of ICTs, and owns a local computer network, a web site   
and all the necessary elements to allow a good performance in a new economy context. The   
IPCE publishes a daily e-commerce news bulletin (distributed via e-mail) and many industryrelated   
market reports; in both, appropriate software is used to analyze, write and publish the   
outcomes. The IPCE, as an information generator, is an office software heavy user.   
Since it’s creation, it was considered absolutely imperative counting with the necessary   
infrastructure capable to offer IPCE’s employees the necessary means to complete their   
information-generating labor. Companies and government agencies involved in IPCE’s   
foundation decide to contribute with those elements according with their own possibilities, so   
the project could be carried out. Then, private companies, mostly from the ICT industry, gave   
the necessary hardware and software, while the government agencies contributed with their   
influence and the required contacts with multinational entities such as APEC. It was precisely   
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APEC who has given IPCE some international positioning, considering its already achieved   
goals related to ICT.   
ICTs from the new economy have made possible for IPCE to create a unique labor in this   
country, such as the specific analysis of the Peruvian ICT, e-commerce and e-business   
industries, the organization of seminars and events regarding those themes, as well as   
conferences and forums, constituting some of IPCE’s main income sources. Likewise, another   
of IPCE’s main goals is to provide accurate information for the internal market as well as the   
international one, so they could have an exact idea of the actual situation of these sectors in   
Peru, generally relegated from international statistics.   
As an example of actual IPCE research, it was determined that Business to Consumer (B2C)   
e-commerce in Peru generated approximately US$10, 9 millions on 2000. An even more   
interesting statistic is that almost 80% of this type of e-commerce was made by Peruvian   
citizens abroad; according to a report by the Inter-American Development Bank (IADB) the   
1, 5 million of Peruvians living abroad send back to their families in Peru approximately   
US$800 millions each year. IPCE concluded that the main market segment to boost B2C ecommerce   
in Peru would be the ever-growing communities of Peruvians living abroad, who   
have discovered in e-commerce a way to securely send assorted products, specially groceries,   
for their relatives, by buying on Peruvian e-tailers and sending the products all over the   
country with relatively low prices.   
Additionally, IPCE was able to determine, evaluate and analyze two new economy   
phenomena produced solely in Peru, including both of them high amounts of creativity and   
talent for making accessible some of the new economy benefits to the masses. These ideas are   
so good that their schemes have been imitated in other countries with similar technology and   
economic characteristics as Peru’s. These two phenomena of approaching Internet and its   
benefits to the population sectors with lower incomes are the “ public Internet rooms”   
(“ cabinas públicas”) and the “ Internet prepaid credit cards”. Both solutions have contributed a   
lot to boost the e-commerce development and Internet utilization across Peru.   
Public Internet rooms are small Internet access areas open to the entire population. The   
business model is essentially a computer Internet access rent at extremely low prices   
(approximately US$0. 70 an hour), due to the ever-growing competition, in a small area for   
around 5 to 20 computers. This access phenomenon comes from 1995 and now there are   
around 1500 public Internet rooms across Peru, giving Internet access for the vast majority of   
the Peruvian Internet users, which are approximately 1 million people.   
The other phenomenon is the Internet prepaid credit cards, which have turned to be the fastest   
growing and preferred payment method for those who can’t afford or meet the requirements   
to get a credit card, mainly because of the high requirements established by the financial   
system. This is why most Peruvians were excluded from purchasing products over the web,   
whether from one of the approximately 50 Peruvian e-tailers or from another e-tailer around   
the world. Currently only half million Peruvians have a credit card. An Internet prepaid card   
is no more than an actual physically existing card or a virtual one, based on a credit card   
number that is related to a bank account, where the owner makes a deposit to “ load” the card   
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enabling it to buy goods or services on the Internet. These cards have the support from the   
main credit card companies, and they work just like any international credit card, allowing the   
owner to buy on any e-tailer on the web. This way, those steep requirements are reduced,   
allowing many people to buy products on the Internet. Right now, there are three Internet   
prepaid credit cards in Peru supported by the three biggest banks in Peru, respectively. There   
are small differences between each one, but the basic characteristics are identical; there is a   
healthy competition environment in this sector. There are 83% Peruvian Internet users willing   
to acquire an Internet prepaid credit card at this very moment. This contributes greatly for the   
development of the countryas well as spreading the Internet for business purposes.   
Additional IPCE achievements are: obtaining the Vice-presidency of the E-Commerce   
Experts Committee for the Free Trade Area of the Americas (FTAA) composed by members   
of both private and government sectors; development of the APEC Readiness Guide on May   
2000 as the only country to do so; being member of the Multi-sectorial Commission for   
Internet Access Broadening, created by the Peruvian Government; and creation of the   
suggested agenda for the new government for Internet Access Broadening and Development   
of ICTs in Peru.   
3. New Economy and Policy   
Despite inflation is not very high in Peru, the main problem IPCE has found is the economic   
recession that inflicts serious damage in the country since 1999, caused mainly by external   
factors. Albeit Peruvian economy has grown just 3, 6% last year, the e-commerce and ebusiness   
industries in Peru showed an important growth over the last few years, as well as a   
growth on the Internet users in Peru. Nevertheless, some projects and important investments   
related mainly to Business-to-Business (B2B) e-commerce and e-business have been delayed,   
waiting for a clear political scenario and economic reactivation to happen.   
IPCE has determined that a sector showing great advances in a short term is the Peruvian   
Government, through the use of the e-Government policies, implicating the use of ICT that   
the new economy offers to improve its relationship with the people. During a first phase, the   
offer of e-Government services was limited for businesses, but now the Government is paying   
attention to its citizens as well, mainly because there are now enough people with web access   
to justify these new policies. These technologies mainly provide official information and eservices   
based on considering the Internet as an interactive communication media. The new   
batch of e-Government policies being carried out is reflected on the recent creation of the   
Peruvian Government Portal.   
In its constant duty of analyzing the actual situation of e-commerce in Peru, IPCE has found   
that Internet access costs for people and companies have been greatly reduced in the last   
couple of years, mainly because of the competition environment that exists nowadays;   
nevertheless, there is a long way due to follow: the access must reach every single person   
across the country. Now, most access is found in Lima, the capital city, limiting the reach of   
the benefits brought by the new economy.   
1-8 0-   
On the financial area, many projects to build Internet focused SMEs have been halted because   
of the high interest rates in the Peruvian financial system. On the logistics area, some   
advances have been made in the past few years, even considering Peru has a very tough   
geography. The biggest logistic companies now have a shipment tracking web-based systems   
that allow customers knowing where exactly is their cargo. Additionally, Customs Authorities   
are developing great efforts to improve their processes by using the Internet and ITC.   
Peruvian Customs are going toward a paperless customs process, and will be exclusively web   
based on a medium term.   
On the legal area, IPCE has been an important player in the whole legal e-commerce   
framework establishment, since it is an organization in charge of making proposals about ecommerce   
so that the business sector as well as the whole society result favored from an agile   
legal system specially focused on these new technologies. Peru has one of the most advanced   
legal systems in Latin America, and IPCE has actively participated in the making of cyber   
laws such as those for digital signatures and certificates, cyber crimes and contracts among   
absent people. Other cyber laws include e-mail legal notifications and tax-free importing of   
end consumer goods, which favors the foreign trade made by natural people through ecommerce.   
Referring to the law on digital signature and certificates, it’s waiting for the publishing of its   
respective regulations, so it can be applied on e-commerce, especially B2B. These laws will   
ease electronic transactions, making them more secure and more efficient. Over the past few   
months, the environment of competition on these new legal faces for e-commerce have been   
significantly developed, and it is becoming a very attractive sector.   
Finally, IPCE is composed of young professionals deeply involved in the use of new   
technologies to achieve the organization’s goals. Being an organization completely focused   
on new economy matters has required a highly trained staff compromised with the efficient   
use and application of these new technologies. The use of IPCE human resources is also   
important to apply this knowledge to directly help society. IPCE organizes different events to   
promote the use of these new technologies as well as giving general advice to anyone   
interested in this knowledge branch, especially for students and potential entrepreneurs.   
Likewise, IPCE is now developing educational projects to spread this knowledge to SMEs   
entrepreneurs, so they can use these technological tools from the new economy to raise their   
productivity, increase their efficiency and enter new global markets, improving the   
performance of this enormous business sector in Peru.   
4. Summing-Up and Looking Forward   
Summarizing, IPCE´s vision is to promote and facilitate the development of electronic   
businesses throughout the country, spreading knowledge, promoting projects and watching for   
the establishment of a legal framework that promotes its development in Peru. The new   
economy represents for IPCE an excellent opportunity to achieve the development for the   
country, giving the necessary spread and promotion in the use of these technologies and   
benefits. In the near future, IPCE plans to continue its contribution and compromise with   
Peru, so that both people and companies could reach their complete insertion in the new   
1-8 1-   
economy; additionally, IPCE will be focused on B2B and e-Government tendencies, which   
are very promising uses of the ITC brought by the new economy. Three recommendations   
IPCE would give as policy changes are:   
- Improve people education, especially on the youth and children, so they can make a better   
use of the technological resources at their reach.   
- Improve Internet access for the masses across the country, making possible that more   
people could have better and cheaper connections.   
- Reduce the barriers that stop technological development, such as high tariffs for   
technological assets.   
1-8 2-   
CASE STUDY: SINGAPORE e-GOVERNMENT   
E-Government Planning And Management Division   
Government Chief Information Office   
Infocomm Development Authority Of Singapore   
Introduction   
Globalisation and the explosive entry of infocomm technology (ICT) into every facet of life   
have changed how people live and work, how companies do business and in particular,   
redefined the nature of government and its relationship with citizens. We have seen the   
remarkable changes that have taken place in the business sector with the advent of ecommerce.   
Similar changes are taking place in governments, spurred by the rising   
expectations of citizens and global competition.   
To survive the fundamental transformations taking place today, all governments need to   
become e-Governments. For Singapore, e-Government is not simply about adding an “ e” to   
government. It covers more than investments in infocomm equipment or setting up a website   
to publish information. e-Government requires that we fundamentally re-think all aspects of   
governance to see how we can leverage on technology and new business models to improve   
efficiency of internal processes as well as change the nature and quality of government   
interactions with both individuals and businesses.   
In June 2000, Singapore launched its S$1. 5 billion e-Government Action Plan. Championed   
by both the Ministry of Finance and the Infocomm Development Authority of Singapore, and   
involving all ministries and agencies, it addresses issues that ps across all aspects of the   
public sector fromleadership, delivery of electronic public services, internal government   
operations and ultimately economic competitiveness. With this plan, the Singapore Public   
Service is working towards the e-Government vision of becoming a leading e-Government to   
better serve the nation in the Digital Economy.   
Route to E-Government—Government Computerisation   
Singapore is one of few countries in the world with an integrated and coherent approach to   
computerisation in the public sector–thanks to an all encompassing Civil Service   
Computerisation Programme (CSCP) that aims to turn the entire Civil Service into a worldclass   
exploiter of Information Technology (IT).   
Since its launch in 1981, the CSCP has brought about many exciting changes to the way the   
Singapore government works, interacts and serves the public. Singapore’s move towards e-   
Government is built on the solid foundation of the CSCP, of which the progress and key   
strategies can be grouped into 4 main development stages:   
1-8 3-

First Wave (early 1980s): The National Computerisation Plan   
It was clear that right from the start, national computerisation was high on the government’s   
agenda. Singapore broke new grounds when the CSCP was launched in 1981 to spearhead the   
national computerisation effort, directed at improving public administration through the   
effective use of IT.

The first wave was directed at the automation of traditional work functions, reducing   
paperwork and clerical staff, and creating demand for the new IT industry. The   
implementation strategy was to start small and scale fast. The programme, started with the   
involvement of 12 ministries/departments and 150 IT staff, is extended service-wide today.   
The National Computer Board (NCB), set up as a central authority to promote and implement   
IT in 1981, played a key role in co-ordinating the implementation of the programme across   
the civil service.

The first phase of the CSCP has resulted in significant manpower savings. A cost-benefit   
review by the Ministry of Finance in 1985 showed that CSCP had generated an impressive   
171% return on investment. This was in additional to the many intangible benefits such as   
operational efficiency improvement, better information support for decision making and new   
services for the public. These achievements have driven the civil service on, in its quest for   
organisational excellence through IT.   
Second Wave (mid 1980s): The National IT Plan

In the second wave, CSCP strategies have matured over the years from improving internal   
operational efficiency and effectiveness to providing integrated services to the public through   
cross-agency linkages. This era of inter-organisational communication and co-ordination saw   
to the creation of three Data Hubs (Land, People and Establishment) to cut down redundancy   
in data capturing and promote cross-agency data sharing within the government.   
An increasing number of public services were developed in the direction of “ one-stop nonstop   
services” for the public and businesses. Some of the award-winning applications include   
the School Links, Integrated Land Use System (ILUS), One-stop Change of Address   
Reporting Services (OSCARS), and the various networks such as TradeNet, LawNet and   
MediNet.

Third Wave (early 1990s): IT2000   
The opportunity for further improvement would be limited if the policies were confined to the   
domestic IT market. The government met the challenges head on and formulated strategic   
thrusts to develop Singapore into a global IT hub, improve quality of life, boost the economic   
engine, link communities locally and globally as well as to enhance the potential of   
individuals. This plan, unveiled in April 1992, is commonly known as IT2000—The   
Intelligent Island Vision.   
1-8 4-

For the CSCP, IT2000 gave greater emphasis to the trend that has already begun—the   
integration of computing resources in the civil service, through the consolidation of   
computing facilities in a data centre and through the setting up of a civil service-wide   
network. At the national level, one of the key deliverables was the creation of an advanced   
National Information Infrastructure (NII) which comprises the infrastructure level of networks   
and the value-added applications such as National Contact Information Service (NCIS),   
Electronic Commerce (EC) applications, Infrastructure for Electronic Identification (IEI), and   
content hosting.

Fourth Wave (late 1990s onwards)—Infocomm 21   
In the late 1990s, the focus was quite clearly on the possibilities brought about by   
proliferation of the internet technology and the convergence of IT with telecommunication.   
Singapore’s internet-based e-filing system for individual taxpayers stood out among many   
widely-acclaimed applications as the world’s first when it was launched in 1998.   
More importantly, the Infocomm Technology revolution requires a paradigm shift. Strategies   
that have worked well in the past may no longer be as relevant for this new economy   
paradigm. Competition is global. Infocomm 21, a five-year plan for infocomm in the New   
Economy, is Singapore’s strategic response to this challenge. At its heart is a vision to   
develop Singapore into a vibrant and dynamic global Infocomm Capital with a thriving and   
prosperous e-Economy and a pervasive and infocomm-savvy e-Society.   
Singapore’s move towards e-Government resides within Infocomm 21, as a strategic thrust   
aiming to better serve Singaporeans in the New Economy.   
Singapore E-Government Action Plan

The Singapore Government intends to be one of the best e-Governments in the world with the   
innovative and efficient delivery of high quality services to the public, private and people   
sectors of the new digital economy. Whenever feasible, government services and transactions   
will be delivered and conducted through electronic means. “ Citizen-centric” services will   
provide seamless end-to-end services to all constituencies.

To realise Singapore’s e-Government vision, an e-Government Action Plan was drawn up   
after wide consultation with all levels of public sector officers. It charts the strategic thrusts   
and programmes that guide the public service in realising the e-Government vision, while   
retaining the flexibility to adapt to changing needs.   
1-8 5-   
Strategies and Programmes   
The Action Plan presents five strategic thrusts for our e-Government activities.   
S1: Re-inventing Government in the Digital Economy   
Governance in the Digital Economy requires a clear understanding of the impact of ICT on   
both internal processes in the public sector and transactions with citizens and businesses. The   
Digital Economy demands reviews of policies, regulations and processes to align them with   
the rapid developments in the economy and to meet rising expectations from the public.   
Public officers must therefore be prepared to change their tried and tested ways in   
transforming government.

S2: Delivering Integrated Electronic Services   
Increasingly, citizens are demanding public services to be delivered online, anytime and   
anywhere, at their convenience. Greater value will be created for the public if electronic   
services are integrated and centred around customers’ needs. The Singapore Government has   
set an ambitious goal for its Public Service with the end objective of providing a convenient   
one-stop, non-stop service for the public.

S3: Being Proactive and Responsive   
As “ time to market” for new services becomes an important consideration, government   
agencies are expected to adopt the same “ sense and respond” approach as the private sector in   
anticipating citizens’ needs and delivering responsive systems and services with speed.   
Existing services and processes also need to be fine-tuned to meet customers’ changing needs   
and in line with new technological possibilities.

S4: Using ICT to Build New Capabilities and Capacities   
ICT offer tremendous opportunities to create new value; to tap the power of collaborative   
knowledge management; and to provide instant knowledge and processing capability to make   
quantum leaps in service delivery. The public sector will go beyond using infocomm   
technologies as a system, but also to radically re-engineer government processes to benefit   
from the new business models of the Internet era.   
S5: Innovating with Infocomm Technologies   
To be a leading e-Government, innovation and experimentation are primordial. Public officers   
are encouraged to be enterprising and be accustomed to situations whereby there is no one to   
learn from, simply because they are the first ones there.   
Where We Are Today   
At the core of government IT infrastructure is the GovII, a multi-layered IT infrastructure,   
that links public sector agencies to facilitate communication between the civil service as well   
as with external bodies and the public. It enables a " Connected Government" through which   
people communicate and work together more effectively and where services are delivered to   
users in an accessible and timely manner.   
1-8 6-   
Singapore ONE (One Network for Everyone), the first nation-wide broadband information   
structure in the world, is available islandwide. All the universities and polytechnics are wired   
with sophisticated campus-wide networks. Atprimary and secondaryschools, we are on   
target to equip every two students with one personal computer and for 30% of the school   
curricula to be IT-based by 2002. 59% of Singapore households own PCs while 58% of the   
residential population subscribe to the internet.   
Government-to-Employee   
Within the civil service, among the infrastructure and suite of applications delivered over the   
GovII are the Public Sector (PS) Smart Card, Government Electronic Mail System (GEMS)   
and the Government Intranet. These enable better communication and sharing of information   
within and between government departments, allowing public officers to work together more   
effectively.   
The government email system, which has a base of 31, 000 users from ministries and statutory   
boards is now handling 12 million mails per month between civil servants, and five million   
email exchanges between the government and the public annually.   
Government-to-Customer   
The eCitizen portal heralds a new era for the Singapore Public Service. The concept requires   
agencies to work across boundaries to integrate information, processes and systems so as to   
provide a seamless online experience to the public. It adopts the metaphor of a citizen   
journeying through life, who along the way goes through certain events and is required to   
complete certain tasks. Government information and services are integrated into multi-agency   
packages (called " Service Packages”) in a way that every person on the street can relate to,   
such as " Move House", " Attend Primary School", or " Look for a Job". Service Packages are   
as far as possible chronologically ordered, reflecting a typical Singaporean's life from birth to   
death, in order to cover all aspects and events in the citizen's life.   
To date, more than 680 eServices have been made available online by the various government   
agencies with 50 eService Packages and 170 eServices in the eCitizen portal. For 2001, we   
are targeting a total of 200 eCitizen online services and 60 service packages to be made   
available to the public.   
Government-to-Business   
On the G-to-B front, we are looking at GeBiz (Government Electronic Business), which is an   
integrated, end-to-end, web-based system to facilitate online procurement within the civil   
service. GeBiz offer individual departments and the government as a whole, sophisticated   
procurement information management, detailed tender statistics and reduced manual dataentry.   
For suppliers, it will be a one-stop, round the clock web-site for electronic submission   
of quotations, offers and invoices.   
1-8 7-   
The Threaded Path   
Singapore has travelled a long way in its efforts of government computerisation and has   
collected numerous accolades that marked our commitment and belief in IT. The eCitizen   
initiative is rated as one of the best public service delivery platforms in the US Federal   
Government’s survey on Integrated Services Delivery in 1999. Singapore was rated one of the   
five leaders in eGovernment, after US in Accenture 2000 survey and again in 2001, after the   
Canadians.   
While the path is never always smooth and glamorous, there are several contributing factors   
which have brought us this far.   
Singapore’s experience in CSCP has proved once again that foresight and leadership are   
critical to the success and sustainability of such large-scale projects. Right from the start when   
the ministerial Committee for National Computerisation (CNC) put forward the CSCP in   
1980, it was never intended to be a stand alone project, but subsumed under a greater national   
goal of building a software centre in Singapore. Such a two-prong mandate of increasing   
government productivity and developing the demand side of the software industry has enabled   
the CSCP to garner the required attention and resources for its successful implementation.   
The commitment of the public service towards organisation excellence is also an equally   
important factor. From the productivity campaigns in the early 1980s to the current Public   
Service 21 vision, the Singapore public service has always strived to improve itself to better   
serve the public. It is this common goal towards excellence which has propelled us to new   
heights through the use of technology.   
TradeNet, launched in 1989, provides traders, freight forwarders and shipping businesses with   
a single point of access to exchange trade documentation electronically with more than ten   
government controlling agencies, including the Trade Development Board, the Customs and   
Excise Department. The OSCARS benefited the public by linking the National Registration   
Department (NRD) to relevant agencies such as the Public Utilities Board and the Work   
Permit Office. Notification of change of address at NRD would activate changes in all   
relevant agencies automatically.   
Cross-agency applications such as these were developed long before integrated services   
become the catch-phrase of the day. This service-wide vision towards excellence and the buyin   
on technology as a key tool have brought ministries and agencies out of their silos and built   
the foundation of inter-organisational co-operation for integrated service delivery.   
The pace of technology is rapid and one has to be in step in order to reap the greatest benefits.   
Singapore recognises the need to be quick in “ time to market” and has made concerted efforts   
to review its plans and strategies regularly to ensure relevance and flexibility in the everevolving   
technology landscape. Government agencies are expected to be nimble and adaptive   
to change; the National Computer Board (NCB) being a good example. Formed in 1980 as a   
statutory board under the Ministry of Finance, it became under the purview of the Ministry of   
1-8 8-   
Trade and Industry in 1997 to create better synergies among economic development and   
industry-promoting agencies. Within this period, 1996 was another year of corporate   
transformation for NCB. A wholly owned subsidiary was spun off from NCB to look into the   
development function of CSCP and the remaining reconstituted to become the Government   
Chief Information Office. The key milestone of NCB evolution is its merger with the Telecom   
Authority of Singapore (TAS) in December 1999 to become the present Infocomm   
Development Authority of Singapore (IDA), following the convergence of   
telecommunications and the information technology.   
What We Are Working Towards   
Six programmes have been identified to drive the strategic thrusts in the e-Government Action   
Plan. These will be our main focus for 2000-2003.   
P1: Knowledge-Based Workplace   
Public officers will be empowered to be knowledge workers who engage in active and   
collaborative learning and knowledge-sharing as part of a culture of continuous learning.   
Learning itself will increasingly be performed online, i. e. e-learning.   
P2: Electronic Services Delivery   
With the public's growing acceptance and usage of the Internet, the Singapore Government   
has been working towards electronic delivery as the key delivery channel for public services.   
The eCitizen portal (www. ecitizen. gov. sg) is the main Government-to-Customer initiative,   
which aims to provide one-stop, non-stop on-line services and information to the public with   
the public in mind. It requires government agencies to work across boundaries to integrate   
information, processes and systems so as to provide a seamless online experience.   
P3: Technology Experimentation   
Public sector agencies will be encouraged to experiment with new technologies that could   
potentially revamp the way they work. Agencies can pioneer initiatives, which are “ first-ofits-   
kind” or “ first-in-its-series” in the public sector, on a trial or pilot basis to better   
understand what new capabilities these technologies can offer and how they can benefit their   
organisations and customers.   
P4: Operational Efficiency Improvement   
The public sector will continue to identify and invest in new systems that improve operational   
efficiency. In doing so, public officers should however actively ask radical and fundamental   
questions to review the relevance and usefulness of functions and processes, and whether   
these could be streamlined to take advantage of the new capabilities made possible by the   
Internet age.   
P5: Adaptive and Robust Infocomm Infrastructure   
Infocomm infrastructure investment in the public sector will be channeled to enable the   
advent of a knowledge-based workplace and the delivery of integrated electronic services, in   
addition to improving operational efficiency. These include both agency-specific projects as   
1-8 9-   
well as service-wide infrastructure projects where the emphasis is on scalability, robustness   
and cost-efficiency.   
P6: Infocomm Education   
The infocomm education programme will target all levels of the public sector. It extends   
beyond traditional IT literacy, skills and application systems training to focus on managers’   
capacity to take advantage of growth in infocomm capability to revamp internal processes and   
external service delivery. This will facilitate the participation of public officers in the process   
of “ re-inventing government” by making meaningful policy decisions in all aspects of   
governance in the Digital Economy.   
The Road Ahead   
Singapore has progressed well so far, but the road to eGovernment has just begun. There   
remains much to be achieved and it will not be easy. Before the dotcom hype, we were   
committed to IT; as the era come and go, we are still as committed. We believe that it is this   
long-term belief and commitment in the innovative use of technology that will see us through   
this exciting and challenging journey.   
1-9 0-   
CASE STUDY ON BUSINESS-TO-BUSINESS E-COMMERCE   
AT TAIWAN SEMICONDUCTOR   
MANUFACTURING CORPORATION   
Dr. Chen Shin-Horng, Research Fellow and Deputy Director   
International Economics Department of Chung-Hua Institution for Economic Research.   
Over the past two decades, the integrated circuit (hereafter IC) semiconductor industry has   
undergone profound structural change characterized by a process of increasing disintegration   
(see Figure 1; all figures are at the end of the case study). Within this process, alongside the   
vertically-integrated integrated device manufacturers (IDMs), pure-play foundries have   
emerged wit