# Case study of samsung – tesco, korea

Business, Company



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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 wellrecognized 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 million

(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 of 6. 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

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- 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

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- 60 trainers were sent to Thailand to experience actual operation of the system
- 3. Adoption

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• 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 future 10.

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

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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 1-7 5-

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 softinfrastructure 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 ecommerce 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 ebusiness

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 ecommerce 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.

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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 taxfree 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 ecommerce 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

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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.

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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 rethink 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:

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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.

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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.

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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.

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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.

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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

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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 agencyspecific projects as

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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.

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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