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Analysis of the Impacts of Offshore Outsourcing on China’s Export Structure

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This paper analyzes the outsourcing status of different industries in China by using the outsourcing index, and find that capital-intensive industries in China accept more offshore outsourcing than labor-intensive industries. Proportion of export for capital-intensive products to total exports was increasing steadily during 1997-2002, and the status of export for labor-intensive or resource-intensive products was just the reverse. We also find that outsourcing has been responsible for a growing part of China’s trade surplus. By using the panel data, we set up a model to make empirical analysis on the influential factors of outsourcing. The results proved that comparative advantage and scale economy are the main bases of outsourcing, and labor intensity and work efficiency of an industry also have impacts on outsourcing. We find outsourcing has positive effects on raising the competitiveness of China’s capital or technology intensive industries. China should encourage local enterprises to accept more offshore outsourcing, and make the most of the advanced technologies and the spillover effects brought by outsourcing optimize and upgrade the industry structure.

Key words: Offshore Outsourcing; Export Structure; Intermediate Products; Panel Data Model

I. Introduction

Offshore outsourcing refers to a phenomenon that enterprises transfer their non-essential business to foreign countries for the purpose of using foreign resources to reduce the production cost and keeping core competitiveness. Offshore outsourcing emerged in 1960s. At that time, international economic pattern changed greatly with stronger Japan and Western European countries, while the U.S. was threatened in the production of some labor-intensive products and products with maturing technology. In order to keep its competitiveness, the U.S. began to concentrate on developing some rising industries such as electronic industry and automation industry. In 1963, the U.S brought out a policy called...
“Production Sharing Scheme” and encouraged enterprises to transfer the production of labor-intensive products or some labor-intensive working procedures to other countries. This scheme stipulated that the re-imports of the oversea assembled products was tax-free for its parts and components originally made in the U.S. Hereafter, other developed countries also adopted the similar policies. Import under this policy was called “Offshore Assembly Provision Import” or “OAP” imports. Since 1990s, transnational companies had been developing rapidly. With their strategies transferring from “diversity” to “refocusing”, scale of offshore outsourcing kept increasing.

The main character of offshore outsourcing is trade of intermediate products of the same industry\(^1\). But outsourcing is different from intra-industry trade. Economists hold that most intra-industry trade occurred between developed countries, while the main form of offshore outsourcing is trade between developed and developing countries\(^2\). So Offshore outsourcing is an intra-industry trade with vertical labor division. Traditional trade theory based on comparative advantage and new trade theory based on scale economy both can explain the driving forces of offshore outsourcing.

As a country with abundant labor resources, China is in a position of accepting offshore outsourcing. Processing trade is the main form of China’s enterprise taking part in offshore outsourcing. According to the statistics of the Chinese custom, in 1992, the value of China’s processing export accounted for 46% of the total export, and in 1998, this number climbed to 55%, and now stabilizes at about 45%. The proportion of processing import to China’s total import increased from 38% to 50% during 1992-1998, and now stabilizes at about 40%. In manufacturing industries, this proportion is much bigger. Based on its abundant labor and trade policy of encouraging processing trade, China has become a treasure place for offshore outsourcing.

This paper tries to make analysis of the extent of China’s participating in offshore outsourcing and the impacts on China’s export structure. How will offshore outsourcing affect China’s trade structure? Which industry contributes the most on China’s trade balance?

We will also make empirical analysis on the bases of offshore outsourcing, and discuss the status of China’s comparative advantage, labor endowments as well as scale economy and their impacts on outsourcing.

\(^1\) Here we only make analysis on outsourcing of manufacturing industries, and neglect outsourcing of services.
The first part of this paper is introduction; the second part is literature review. In the third part, we will analyze the impacts of outsourcing on China’s export structure by calculating “outsourcing index”. The fourth part is empirical analysis, we will make analysis of the bases of China’s offshore outsourcing. The last part is conclusion and comments.

II. Literature Review

2.1. Outsourcing Phenomenon and International Trade

In recent years, offshore outsourcing has been paid more and more attention by economists, and research on outsourcing has formed a new field in international economics. Data of trade in parts and components has been used in this kind of research. For example, Compa and Goldbeg (1997) analyzed the import of intermediate products in each industry in Canada, Japan, Britain and the U.S. They found that from 1975 to 1996, imports of intermediate products in the U.S have increased by more than one time, and scale of offshore outsourcing in Britain has also increased a great deal. By using American companies as an example, Feenstra (1998) measured the imports of all intermediate products and finished products since 1970s, and found that outsourcing has been growing all the time. By making input-output analysis, Hummel, Rapopot and Yi (1998) calculated the input of imported intermediate products in specified industries of 9 OECD countries, and confirmed the growth of offshore outsourcing.

Besides the research on the increasing amount of outsourcing, the relationship between offshore outsourcing and imparity of wage and employment has also been a new research field (Abraham and Taylor (1996), Feenstra and Hanson (1996), Slaughter (2000)). By measuring the wide definition of outsourcing, Feenstra and Hanson (1996, 1999) found that outsourcing has enlarged the wage difference between the skilled workers and unskilled workers in the U.S.. Slaughter (2000) analyzed outsourcing of the multinational companies with headquarters located in America, but did not get the same conclusion. Feenstra and Hanson (1998) measured the influences of outsourcing and technology progress on comparative wage of American nonproductive workers, and found that wage increase caused by technology progress was 20%-35% higher than that caused by outsourcing. Moreover, recent research has found that outsourcing should not be regarded as the “chief criminal” of the increasing unemployment rate of America after 2001. Baily and Lawrence (2005) stud-
ied the employment restructure of manufacture and service industry caused by outsourcing in America. They found that only 11% of total unemployment in manufacturing industries was influenced by offshore outsourcing, and it was much less in service industries.

2.2. Theory Basis of Outsourcing

Jones and Kierzkowski (1990) found that comparative advantage and scale economy could be the driving force of the decentralization of production process. Lu Feng (2004) analyzed the conception, profits and determinant factor of intra-product labor division, and asseverated that comparative advantage and scale economy should be the driving force of international labor division. Although they did not make the direct research on Offshore outsourcing phenomenon, their theory analysis and research methods were helpful for the research on outsourcing.

Offshore outsourcing is a new type of international labor division, and comparing with the traditional international trade, it has three characters. Firstly, international labor division of outsourcing is the division of different working procedures in the same product, and not the division in producing different products. Secondly, the objects of outsourcing are the intermediate products, not the finished products. Thirdly, most products in outsourcing are in the same industry, and outsourcing labor division includes vertical division between developed and developing countries based on the comparative advantage. Both the traditional trade theory based on comparative advantage and the new trade theory based on scale economy can offer some theory explanations for the basis and source of offshore outsourcing.

III. Analysis of outsourcing on China’s export structure

3.1. Measurement of outsourcing

The main character of offshore outsourcing is the intra-product trade between developed and developing countries. Now, economists measure outsourcing in three ways. The first one is to calculate trade in parts and components directly through the Custom’s statistical data. This is the most commonly used method, and many economists study outsourcing phenomenon by this method, such as Feenstra and Hanson (1998), Ronald Jones,
Henryk Kierzkowski and Chen Lurong (2004). However, the first edition of SITC does not differentiate parts and components and finished products; although the second edition of SITC adds a great deal of statistics about parts and components, countries adopt this edition are not popular and the covered products are not comprehensive. The second method is to get the data by making analysis on the input-output table (Hummels, Ishii, Yi (2001), and Ingo Geishecker and Holger Gorg (2004)). In some countries, data of input-output table is comparatively complete and serial, and the native inputs and imported inputs have been differentiated; so the data of imported intra-product in each industry can be educed. However, only a small number of countries have such perfect input-output tables, most countries including China do not have utilizable tables. The third one is to measure outsourcing indirectly through processing trade. In developing countries, processing trade develops rapidly, and has the same character of offshore outsourcing. Therefore, data of processing trade can be used to measure outsourcing. As statistical data of processing trade in developing countries is relatively complete, this method is applicable in studying the outsourcing phenomenon of developing countries. This paper uses the third method to analyze China’s outsourcing phenomenon.

3.2. Outsourcing index of various industries in China

In order to make analysis, we often need to deal with data and work out some indices. Considering the status of China’s outsourcing, this paper put forward an index, which is called “outsourcing index3”. The calculating formula is as following:

\[
OUT_{jt} = 1 - \frac{EXP_{jt} - pEXP_{jt}}{EXP_{jt} + pEXP_{jt}}
\]

OUT stands for outsourcing index; EXP is the total export of this industry; pEXP (export of processing trade) is the outsourcing export of this industry; j stands for industry; t stands for years. The rage of the outsourcing index is [0,1].

The reason why this paper chooses export data to measure the outsourcing in China is as follows: Firstly, in the process of offshore outsourcing, China is generally on the position of accepting outsourcing, that is to say, China imports components and parts from de-

3) It also can be measured by the proportion of outsourcing export to the total export. Here we make some changes in order to enlarge the value of the index and make it more convenient for analysis.
veloped countries, and exports finished products after processing. The classification of the
finished products are not the same with those of imported components and raw materials in
SITC, therefore, if we choose the import, it will be difficult to measure the outsourcing de-
gree of a specific industry. Secondly, the export of processing products is the result of
China’s outsourcing internationally, so the comparison of processing trade with the total
export of a specific industry can measure the extent of China’s accepting outsourcing.

As it is difficult to obtain the data of import and export of processing trade in China’s
various industries, we only calculate the outsourcing index on 1-digit SITC basis4 during
1997-2002. The result is as follows.

Table 1. Outsourcing index of China’s various industries during 1997-20025

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0.33</td>
<td>0.33</td>
<td>0.35</td>
<td>0.33</td>
<td>0.36</td>
<td>0.35</td>
</tr>
<tr>
<td>1</td>
<td>0.12</td>
<td>0.11</td>
<td>0.17</td>
<td>0.16</td>
<td>0.13</td>
<td>0.12</td>
</tr>
<tr>
<td>2</td>
<td>0.14</td>
<td>0.13</td>
<td>0.12</td>
<td>0.11</td>
<td>0.14</td>
<td>0.16</td>
</tr>
<tr>
<td>3</td>
<td>0.19</td>
<td>0.14</td>
<td>0.20</td>
<td>0.21</td>
<td>0.14</td>
<td>0.09</td>
</tr>
<tr>
<td>4</td>
<td>0.88</td>
<td>0.83</td>
<td>0.71</td>
<td>0.67</td>
<td>0.69</td>
<td>0.56</td>
</tr>
<tr>
<td>5</td>
<td>0.31</td>
<td>0.34</td>
<td>0.34</td>
<td>0.35</td>
<td>0.35</td>
<td>0.33</td>
</tr>
<tr>
<td>6</td>
<td>0.65</td>
<td>0.63</td>
<td>0.60</td>
<td>0.57</td>
<td>0.56</td>
<td>0.49</td>
</tr>
<tr>
<td>7</td>
<td>0.90</td>
<td>0.91</td>
<td>0.90</td>
<td>0.89</td>
<td>0.89</td>
<td>0.86</td>
</tr>
<tr>
<td>8</td>
<td>0.75</td>
<td>0.76</td>
<td>0.75</td>
<td>0.72</td>
<td>0.71</td>
<td>0.67</td>
</tr>
</tbody>
</table>

Source: China Yearbook of Foreign Economy and Trade 2003 and Feenstra Robert C. and Gordon H. Hanson

Generally speaking, outsourcing is rarely in the process of producing farm products.
But in the statistics of China’s export trade, we can find that there is a little import and
export of processing trade in SITC0 and SITC1 products. When we calculate the out-
sourcing index of SITC0 and SITC1 Products, there will be two effects. The advantage is

4) The SITC classification include: SITC0 Food and live animal chiefly for food; SITC1 Beverages and tobacco; SITC2
Non-edible Raw materials; SITC3 Mineral Fuels, Lubricants and related materials; SITC4 Animal and vegetable oils,
fats and waxes. SITC5 Chemicals and related products; SITC6 Light and textile products, rubber products, minerals and
metallurgical products; SITC7 Machinery and transport equipment; SITC8 miscellaneous products; SITC9 products not
otherwise classified. Here we do not calculate SITC9.
5) In order to make use of the relative data, we classify all the industries into 9 groups according to the SITC standard.
So in this paper, products on 1 digit SITC basis have the same meaning of industries on 1 digit SITC basis.
6) The SITC data is calculated from the statistical data of the Chinese Custom’s the Harmonized System. As some
observation could not be concorded to an SITC category, there are some errors but not affect the results of the
analysis.
that we can extend the range of comparable industries, and make the conclusion more persuasive. The disadvantage is that it may lead to some confusion of the analysis. Therefore, this paper will explain and adjust some possible errors in specific industry when making analysis.

3.3. Analysis of the present condition and trends of China’s offshore outsourcing

3.3.1. Impacts of outsourcing on exports of different factor-intensive products

According to the 1-digit SITC, primary products of SITC0-SITC4 are generally defined as resource-intensive products. Manufactured products of SITC6 and SITC8 are defined as labor-intensive products. Manufactured products of SITC5 and SITC7 are defined as capital and technology intensive products. This paper respectively calculates the outsourcing indices of these three sorts of products during 1997-2002.

<table>
<thead>
<tr>
<th>Classification</th>
<th>1997</th>
<th>1998</th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resource-intensive</td>
<td>0.28</td>
<td>0.25</td>
<td>0.27</td>
<td>0.26</td>
<td>0.25</td>
<td>0.25</td>
</tr>
<tr>
<td>Labor-intensive</td>
<td>0.71</td>
<td>0.72</td>
<td>0.71</td>
<td>0.67</td>
<td>0.66</td>
<td>0.61</td>
</tr>
<tr>
<td>Capital-intensive</td>
<td>0.82</td>
<td>0.84</td>
<td>0.84</td>
<td>0.84</td>
<td>0.84</td>
<td>0.82</td>
</tr>
</tbody>
</table>

Source: China Yearbook of Foreign Economy and Trade 2003

From Table 2, we can see that outsourcing has the greatest influence on exports of capital-intensive products, and the outsourcing indices of such products are all above 0.8. Labor-intensive products are in the next place, and the outsourcing indices range from 0.6 to 0.7. Outsourcing has the least influence on resource-intensive products, and the outsourcing indices only range from 0.2 to 0.3.

From the above analysis, we can find that outsourcing of capital-intensive products China accepted are more than that of labor-intensive products. The main reason is that developing countries are labor abundant, and most working procedures of capital-intensive products had been transferred to the developing countries. Meanwhile, the proportion of the exports of China’s capital-intensive products to the total exports grew substantially during 1997-2002, and the proportion of the exports of labor-intensive and resource-intensive prod-
ucts went down (Table 3). Therefore, to some extent, outsourcing is responsible for the change of export structure in China.

Table 3. Proportions of exports of China’s different kinds of products to total exports during 1997-2002

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Resource-intensive</td>
<td>13.10%</td>
<td>11.22%</td>
<td>10.22%</td>
<td>10.22%</td>
<td>9.92%</td>
<td>8.76%</td>
</tr>
<tr>
<td>Labor-intensive</td>
<td>57.38%</td>
<td>55.83%</td>
<td>54.27%</td>
<td>51.74%</td>
<td>49.31%</td>
<td>47.44%</td>
</tr>
<tr>
<td>Capital-intensive</td>
<td>29.52%</td>
<td>32.95%</td>
<td>35.50%</td>
<td>38.04%</td>
<td>40.77%</td>
<td>43.80%</td>
</tr>
</tbody>
</table>

Source: China Yearbook of Foreign Economy and Trade 2003

3.3.2. Contributions of different industries’ outsourcing to the balance of trade

We respectively calculate the average balance of processing trade of China’s SITC0-SITC8 industries and the average balance of total trade of that industry during 1997-2002. We can see the results from Chart 1.

![Chart 1. Contribution of different industries' processing trade for the total balance of trade during 1997-2002 in China](chart)

Source: China Yearbook of Foreign Economy and Trade 2003

During 1997-2002, the trade deficit in SITC7 was at average 9.6 billion dollars annu-
ally, while the processing trade surplus caused by outsourcing was 29.9 billion dollars, therefore, outsourcing made the most contribution for the balance of trade in this industry. On the contrary, total trade balance in SITC6 was surplus, and the trade deficit caused by outsourcing was the biggest, therefore, contribution of outsourcing in this industry was negative. In addition, based on from the absolute quantity, the trade surplus caused by outsourcing in SITC8 was biggest, and it was at average 39.3 billion dollars annually during 1997-2002.

As a whole, the surplus caused by outsourcing was 1.5 times as much as that caused by the total trade during 1997-2002, and we can conclude that outsourcing has been responsible for a growing part of China’s trade surplus.

IV. Empirical analysis

4.1. The model

Based on the econometric method, in this part, we will use outsourcing index as the dependent variable, and the index of revealed comparative advantage (RCA), the index of intra-industry trade (INTRA), the labor-intensive index (LABOR) and the labor productivity (VL) as independent variables, to analyze the influence of specific factors on outsourcing.

Each variable is two-dimensional and has two series of time and industry, so we set up a model of panel data. The form of this model is as follows:

\[
OUT_{jt} = c + \beta_1 RCA_{jt} + \beta_2 INTRA_{jt} + \beta_3 LABOR_{jt} + \beta_4 VL_{jt} + u_{jt}
\]

Where t stands for time, and j stands for industry.

4.2. Variable choice and data treatment

4.2.1. Revealed comparative advantage (RCA)

Revealed comparative advantage (RCA) was brought forward by Balassa (1965) to measure the comparative advantages of different countries. Because this index brought the

7) See Appendix 1 for the form of the model.
market share of different countries and different products into consideration, and emphasized on the export performance of one country, it has been comprehensively used by the World Bank and other economic organizations in recent years.

The RCA of good i in country j is measured by export proportion of the country in the world. That is to say, if $X_{ij}$ stands for the export of good i of country j, $X_{ij}$ stands for the total export of country j, $X_{iw}$ stands for the total export of good i of the world, and $X_{w}$ stands for the total export of all goods in the world, then RCA is:

$$RCA_{ij} = \frac{X_{ij} / X_{iw}}{X_{ij} / X_{w}}$$

If the $RCA_{ij}$ is under 1, it means the proportion of the export of good i to all the export of country j is less than that proportion of the world, which shows country j has comparative disadvantage in good i. Similarly, if the RCA is above 1, it means country j has comparative advantage in good i. According to the standard of JETRO, RCA over 2.50 denotes that the industry of the country has super comparative advantage; RCA lies between 1.25-2.50 denotes that the industry of the country has sub-super comparative advantage; RCA lies between 0.80-1.25 denotes that the industry of the country has media-level comparative advantage.

4.2.2. Index of intra-industry trade

The most authoritative formula about intra-industry trade is Grubel-Lloyd index, that is:

$$INTRA_i = 1 - \frac{|X_i - M_i|}{X_i + M_i}$$

where $X_i$ stands for export, $M_i$ stands for import, and $i$ stands for industry. If it equals to 1, it means all trade are intra-industry trade. According to the new trade theory, scale economy is the basis of intra-industry; therefore, this paper uses this index to measure the scale economy.

4.2.3. Labor-intensity index

The labor-intensity index is used to measure the labor-intensive degree of various
industries. The labor-intensive index of industry $j$ (LABOR$_j$) is as follows$^8$:

$$LABOR_j = \frac{V_j}{N_j} / \frac{V_t}{N_t}$$

where $V_j$ and $V_t$ respectively stand for the added value of industry $j$ and that of all industries in China, while $N_j$ and $N_t$ respectively stand for the number of the employees of industry $j$ and that of all industries in China. If the numerical value of the index is 1, it means the labor-intensive degree of the industry is at the average value of the country. If the index is under 1, it means this industry is labor-intensive, that is, the value of the labor intensity index varies inversely as the labor-intensity of the industry.

4.2.4. Measurement of labor productivity

The labor productivity shows the efficiency of different industries. In this paper, it is defined by the rate of the total annual production to the number of workers in the specific industry.

$$VL_j = \frac{TV_j}{N_j}$$

where $TV_j$ and $N_j$ respectively stand for the total production value and the number of workers in industry $j$ in a certain year. The labor productivity refers to the value that each worker creates in this industry in one year.

4.2.5. Re-classification of industries

In order to calculate the labor-intensity index and the index of the labor productivity, we re-classified the 34 industries of China’s Statistics Almanac, and combined them into 8 industries based on SITC$^9$. The detailed classification and the calculation results are in the Appendix of this paper.


$^9$ We find that SITC 4 could not be included in reclassification, so we only use 8 industries to make the regression. in the above analysis, we have found that the data of SITC4 has significant error, so analysis excluding SITC4 will be more accurate.
4.3. Regression results and analysis

We make analysis on this model by Eviews3.1. The result is as follows (see Table 4). RCA has positive correlation with outsourcing index and the coefficient is significant, which is in accord with expectations. It shows that the benefit of comparative advantage is one of the bases of China’s taking part in offshore outsourcing.

Table 4. Parameter estimates of the influential factors of outsourcing

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>t-Statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>-0.045</td>
<td>-0.60</td>
</tr>
<tr>
<td>RCA</td>
<td>0.274</td>
<td>20.72**</td>
</tr>
<tr>
<td>INTRA</td>
<td>0.152</td>
<td>3.21**</td>
</tr>
<tr>
<td>LABOR</td>
<td>-0.014</td>
<td>-0.54</td>
</tr>
<tr>
<td>VL</td>
<td>0.079</td>
<td>1.61*</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.95</td>
<td></td>
</tr>
<tr>
<td>Adjusted R-squared</td>
<td>0.95</td>
<td></td>
</tr>
</tbody>
</table>

* significant at 5%; **significant at 1%.

The positive coefficient of the intra-industry index (INTRA) reveals that the volume of intra-industry trade has positive correlation with China’s outsourcing, and the intra-industry trade is the main form of China’s export. It also shows that the scale economy is the important driving force for China’s outsourcing. The coefficient of the RCA and the intra-industry index are significant, which prove that comparative advantage and scale economy are both the bases and sources of outsourcing.

The coefficient of Labor-intensity index (LABOR) is negative, which shows that there is positive correlation between the outsourcing degree and labor intensity, because the labor intensity index varies inversely as the labor intensity of the industry. The regression result means the labor abundance is helpful for china to accept the offshore outsourcing, but coefficient is not obvious.

The coefficient of labor productivity (VL) is positive, which shows that the variation of labor productivity has positive correlation with China’s outsourcing degree, and industries with higher labor productivity can accept more outsourcing.

10) we firstly made general differentiate changes to the data in order to eliminate autocorrelation of the random variable; then we adopted GLS method to make analysis.
This paper tries to make primary exploration on this thesis by using the data of 1997-2002 of China, and further research should be made on the signs of the coefficient and the missed independent variables.

4.4. Brief Conclusions

From the above analysis, we can get some conclusions as follows.

Firstly, comparative advantage is the main driving force for China’s outsourcing internationally. Through calculating the indices of revealed comparative advantage of China’s different industries during 1997-2002, we can find that the comparative advantages of China lie in the labor-intensive products (SITC6 and SITC8). The positive regression coefficient of the labor-intensity index reveals that the labor intensity has positive correlation with China’s outsourcing; Therefore, China should make good use of its labor resource, and combine it with the capital and technology of the foreign companies, to improve China’s competitiveness in offshore outsourcing market.

Secondly, outsourcing can raise the comparative advantage of capital and technology intensive industries in China. Through the calculation of outsourcing index and RCA of SITC8, we found that its outsourcing index is significant and the comparative advantage had the fastest growing speed. It denotes that outsourcing is one of the most important factors for raising the competitiveness of China’s capital and technology intensive industries.

Thirdly, because outsourcing is compelled by scale economy in a great extent, China should actively develop and enlarge its scale economy. At present, the exporting enterprises of our country are generally small-scaled, and are difficult to adapt themselves to the furious competition in global market. Therefore, the government should work out some policies to realize the scale economy extensively.

Fourthly, China should not only encourage local enterprises to accept more Offshore outsourcing, but also lays stress on improving local manufacture and exportation. In the long run, China needs to pay more attention to the absorption of advanced technologies, and make the most of the technologies brought by outsourcing, in order to optimize and upgrade the country’s industry structure.
V. Concluding remarks

This paper firstly analyzes the character of outsourcing in international trade, that is, the intra-product trade between developed countries and developing countries. It is not the same as intra-industry trade or trade between different industries.

Then we analyze the outsourcing status of different industries of China by using the outsourcing index, and find that with the labor-intensive working procedure of the capital-intensive products transferring from the developed countries to the developing countries, capital-intensive industries in China accept more offshore outsourcing than labor-intensive industries. Share of export for capital-intensive products in total exports was increasing steadily during 1997-2002, and the status of export for labor-intensive or resource-intensive products was just the reverse. We also find that outsourcing has been responsible for a growing part of China’s trade surplus, and surplus caused by outsourcing was 1.5 times as much as that caused by the total trade during 1997-2002.

By using the panel data, we set up a model to make empirical analysis on the influential factors of outsourcing. The results proved that comparative advantage and scale economy are the main bases of outsourcing, and labor abundance and work efficiency of an industry also have impacts on outsourcing. We find outsourcing has positive effects on raising the competitiveness of China’s capital or technology intensive industries. China should encourage local enterprises to accept more offshore outsourcing and enlarge the comparative advantages and scale economy. China also should make the most of the advanced technologies and the spillover effects brought by outsourcing to optimize and upgrade of the industry structure.

As a new type of international labor division, outsourcing has attracted the attention of many economists. But there are limits in the empirical analysis due to the lack of statistical data. This paper reclassifies the data of China’s processing trade in recent years, so it was hard to avoid affecting the exactness of the research. If more comprehensive data can be obtained in the future, we can make further research in this field.
Appendix

1. The panel data model

The panel data is two-dimensional and the correction form of the model determined the validity of the coefficient. So we must make test on the form of the model firstly (Li Zinai, Ye Azhong, 2000). The aim of test is to testify that whether the parameters of the model remain the same on any cross sections and any time point. We adopt the covariance analysis to test the following two hypotheses.

Hypotheses 1. Slopes \( (\beta_1, \beta_2, \beta_3, \beta_4) \) remain the same on any cross sections and any time point, but the intercepts \( (c) \) are not the same.

\[
H_1: \quad OUT_{jt} = c_j + \beta_1 RCA_{jt} + \beta_2 INTRA_{jt} + \beta_3 LABOR_{jt} + \beta_4 VL_{jt} + u_{jt}
\]  

Hypotheses 2. Slopes \( (\beta_1, \beta_2, \beta_3, \beta_4) \) and intercepts \( (c) \) remain the same on any cross sections and any time point.

\[
H_2: \quad OUT_{jt} = c + \beta_1 RCA_{jt} + \beta_2 INTRA_{jt} + \beta_3 LABOR_{jt} + \beta_4 VL_{jt} + u_{jt}
\]

Obviously, if we accept hypothesis 2, the test finished. If we denied this hypothesis, then we test hypothesis 1, and determine whether the slopes are the same. If hypothesis 1 is also denied, we should use the formula (3).

\[
OUT_{jt} = c_j + \beta_1 RCA_{jt} + \beta_2 INTRA_{jt} + \beta_3 LABOR_{jt} + \beta_4 VL_{jt} + u_{jt}
\]  

The test is made by two F tests. The statistic we use to test H2 is:

\[
F_2 = \frac{(S_2 - S_1) / [(n-1)(K+1)]}{S_1 / [nT - n(K+1)]} \sim F[(n-1)(K+1), n(T-K-1)]
\]

The statistic we use to test H1 is:

\[
F_1 = \frac{(S_3 - S_2) / [(n-1)K]}{S_1 / [nT - n(K+1)]} \sim F[(n-1)K, n(T-K-1)]
\]

In the above formula, S1, S2, S3 denote ESS. n stands for the number of the sample points on cross sections. T stands for number of time series; K is the number of estimating
parameter (not include the intercept). On a given significant degree, we can check the F distributing table and find the critical value, and compare it with the F statistics we calculated, and then we can determine denying or accepting the hypothesis.

We make test by the data of the 9 industries in 1997-2002, and get \( F_2 = 5.75 \), which is below the critical value at the 1% significant. So we accept \( H_2 \) and use formula (2).

2. *RCA*

Table A1. RCA index of China’s industries during 1997-2002

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Source: *China Yearbook of Foreign Economy and Trade 2003* and *International Trade Statistics Yearbook*, authors’ calculation.

3. *Intra-industry trade index*

Table A2. Intra-industry trade index of China’s industries during 1997-2002

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Source: *China Yearbook of Foreign Economy and Trade 2003*, authors’ calculation.
4. Labor-intensity index

Table A3. labor-intensity index of China’s industries during 1997-2002

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Source: 

5. Labor productivity

Table A4. labor productivity of China’s industries during 1997-2002 (0.1 million Yuan per capita per year)

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Source: 
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<td>Rubber Products</td>
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References


How Much Do Exchange Rate Shocks Matter For Domestic Inflations?*

Ai-Young Kim
Associate Professor, School of International Business, Nam Seoul University

This study investigates pass-through coefficients of exchange rates to consumer prices in Korea. Using dynamic OLS, estimations are performed for the two different periods as well as with different variable selection. The estimated pass-through coefficients tend to be larger as exchange rate fluctuations increase since the adoption of freely floating exchange rate system after the currency crisis. This finding supports Taylor's conjecture that declines in exchange rate volatility leads to lower exchange rate pass-through to domestic inflations.

The overall results suggest that the effectiveness of the monetary policies within the inflation-targeting framework becomes modest as long as exchange rate fluctuations increase. Therefore, to improve the effectiveness of the monetary policies within the inflation-targeting, the stability of exchange rate movements is required and then inflation-targeting monetary policy to insulate the changes in domestic prices from external shocks will be effective.

Key words: Pass-Through, Exchange Rate, Dynamic OLS, Inflation-Targeting. JEL Classification: C32, E31, F31, F41

I. Introduction

The degree to which exchange rate movements are passed-through to prices has long been a question of interest in international economics. 1) Since major industrialized countries have adopted more flexible exchange rate regimes following the demise of the Bretton-Woods system in early 1970s, interest in this issue was rekindled. In general, there are concerns that a vicious circle may emerge in which a large depreciation can fuel inflation and increase expectations of higher future inflation.

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* This paper was supported by research fund from Nam Seoul University Korea for the 2005 school year.
1) The change in domestic prices that results from a change in exchange rate is referred to as pass-through.
Recently, however, this fear that a currency depreciation could degenerate into inflationary spiral subsided in world economy because industrialized countries began to reduce and stabilize their inflation rates. For example, United Kingdom, Canada and Australia adopted inflation-targeting regime for monetary policy towards low and stable inflation. As a result, the response of the consumer prices to the large currency depreciation experienced by United Kingdom, Canada and Sweden in the 1990s was much smaller than expected. This common experience has led to the belief that the extent to which exchange rate movements are reflected in prices has declined.

Suffering from the currency crisis in December 1997, Korea has also moved to freely floating exchange rate system and inflation-targeting regime. With these changes in both exchange rate system and monetary policy, it is important to assess the impact of the exchange rate on domestic prices because the exchange rate can have a potentially larger impact on inflation and inflation expectation in a small open economy such as Korea. In addition for a central bank to conduct monetary policy efficiently, and respond adequately to different shocks, it is essential to understand the transmission mechanism of monetary policy. In a small open economy, the exchange rate implies one of the key open economy monetary transmission channels. Consumer price inflation is directly affected by changes in the exchange rate through the effect on import prices while indirectly affected through aggregate demand. Therefore, thorough knowledge of the underlying relationship between exchange rates and prices, i.e. of exchange rate pass-through, is of particular importance for monetary policy within the inflation targeting environment.

A large number of empirical literatures deals with the exchange rate pass-through to prices. The primary purpose of these studies is the assessment of the degree and dynamics of the pass-through because the degree and timing of pass-through is important for forecasting inflation and for setting monetary policy in response to exchange rate changes. Most studies empirically find incomplete pass-through to prices even in the long-run often combined with quite substantial lags in the adjustment process. Given that the exchange rate pass-through is allowed to be incomplete, the effect of exchange rate movements on CPI inflation is expected to be limited so that the performance of monetary policy in terms of inflation stabilization can be improved.

The purpose of this paper is, therefore, to identify long-run relationship between exchange rates and consumer prices, and to estimate the degree of exchange rate pass-through to prices in case of Korea. This study is different from the existing ones in several ways.

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First, most of empirical studies in the past years have dealt with microeconomic factors. To counter this imbalance, I concentrate on aggregate data rather than on particular industries or products. Second, most of empirical studies using Korean data focus on the exchange rate pass-through to import and export prices. To fill this gap, I am primarily interested in the overall effect of exchange rate changes on consumer prices, an issue which is most relevant for monetary policy.

According to Menon (1995), different results may stem from the use of different methodology, model specification and variable selection rather than from different time period covered. Third, in this respect, I estimate the long-run relationship between exchange rates and consumer prices using dynamic OLS with different variable selection as well as with different time period.

The paper is organized as follows. Following the introduction, section II briefly reviews the theoretical and empirical literatures on the exchange rate pass-through from microeconomic and macroeconomic viewpoints. Section III introduces empirical model and econometric methodologies. Section IV contains the data and results of the empirical analysis. Finally, conclusion and policy implications are discussed in section V.

II. Exchange Rate Pass-Through Literatures

Most theoretical models on the exchange rate pass-through focused on microeconomic aspects such as the shape of demand curve and cost function, or the existence of irreversible investment (sunk cost). Following these developments in theoretical studies, a large amount of empirical research has estimated the exchange rate pass-through using micro data of firms' export prices.

Krugman (1987) argues that "pricing to market" by foreign suppliers can explain why U.S. import prices do not fully reflect changes in exchange rate. To maintain market share, the foreign suppliers may not change the prices and instead adjust the profit margins. Burstein et al. (2002) argue that distribution costs and substitution away from import to lower quality local goods can account quantitatively for the incomplete pass-through of exchange rate depreciations to domestic prices.

Recently Taylor (2000) has stimulated interest in dynamic changes in the exchange rate pass-through from a macroeconomic perspective. He conjectures that the exchange rate pass-through has persistently declined in response to changes in the macroeconomic envi-
ronment such as intensified competitive pressure, a decline in worldwide inflation and exchange rate volatility, and changes in the world trade structure such as the decrease in the import share of raw materials as well as the increase in the share of manufactured products. Based on his conjecture, to derive the implication of changes in the exchange rate pass-through to the macroeconomy, Compa and Goldberg (2002) estimate the exchange rate pass-through to import prices for the 25 OECD countries, based on nominal effective exchange rate, marginal cost and aggregate output. In addition, to examine whether the pass-through has declined in 1990s, they compare the estimated coefficients for the full period with those for the subsample for 1975-89. As a result, they obtain the results which support Taylor's conjecture.3)

Akira Otani et. al. (2003) estimate the exchange rate pass-through to Japan's import prices and examine the decline in exchange rate pass-through. They find that the short-term pass-through is 0.84 and the long-term pass-through is 1.12 for the full sample period while the short-term and long-term pass-throughs for 1978-89 are 1.13 and 1.56, respectively. Their result also support Taylor's conjecture that declines in pass-through are partly due to low inflations since 1990s.

Using Korean data covering the period from 1985q1 to 1998q4, Choi (2000) estimates the exchange rate pass-through to Korea's import prices using dynamic OLS for the full period and two subsample periods, one for 1985q1-1989q4 and the other for 1990q1-1998q4. His findings are as follows. First, the long-run exchange rate pass-throughs to aggregate import prices, and to import prices for raw materials and for capital goods are 0.57, 0.56 and 0.55 while the pass-through to import prices for consumption is 0.24 for the full period. Second, estimating error correction model, he find that the exchange rate pass-through coefficient to aggregate import prices are larger with more flexible exchange rate movements.

In 1990s, Many countries including Sweden, United Kingdom, South Korea, Thailand and Brazil suffered from currency crises in 1990s. The resulting large depreciations of these countries have posed a challenge for monetary policy because large depreciations are likely to bring about inflation-depreciation spiral.

In reality, however, the resulting observed inflations have been lower than expected. This low inflation atmosphere motivates policy makers as well as researchers to be inter-

3) Campa and Goldberg report that the average short-term pass-through for 25 countries is 0.61 and the average long-term pass-through is 0.77 for the full sample period while the short-term and long-term pass-throughs for 1975-89 are respectively lower by -0.04 and -0.27.
ested in the exchange rate pass-through to domestic inflation rather than to import and export prices.

There is a large body of theoretical literature on the incomplete pass-through of exchange rate movement to inflation while there are some empirical works. 4) McCarthy(2000) analyzes the impact of exchange rate changes on import prices, producer prices and consumer prices in a recursive VAR framework. Using data from six industrialized OECD countries, he finds that exchange rate changes have modest effects on consumer prices.

Following McCarthy, Hüfner et al.(2002) study the pass-through of exchange rate changes to consumer prices for the countries in the euro area by estimating vector error correction models. They find that 1% exchange rate shock lead to less than 0.07%, 0.08%, 0.12%, 0.11% and 0.08% increases in consumer prices after 12 months for France, Germany, Italy, Netherlands and Spain, respectively.

Yi(2004) estimates the exchange rate pass-through to domestic prices by using VAR model following McCarthy, and by building the price behavioral equation, using monthly data covering the period from 1986.1 to 2004.3 for Korea. He finds that after 12 months of exchange rate changes, pass-through to import prices, producer prices and consumer pri-

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4) Refer to Dornbusch(1987), Feenstra et al. (1994), Goldberg et al.(1997)
ces are 0.42, 0.15 and 0.05 for 1986.1-1997.11 and 0.80, 0.27 and 0.12 for 1997.12-2004.3. Y's result implies that exchange rate changes tend to have larger impacts on domestic prices as Korea moves to the freely floating exchange rate system.

<Figure 1> shows the relationship between the exchange rate changes and consumer price changes in Korea. Figure 1 validates incomplete exchange rate pass-through to consumer prices with some lags in the adjustment process.\(^5\)

**III. Empirical Model and Econometric Methodologies**

3.1. Theoretical Background for Empirical Modelling

Goldberg and Knetter (1997) define exchange rate pass-through as "the percentage change in local currency import prices resulting from a one percent change in the exchange rate between the exporting and importing countries." (p.1248) However, changes in import prices are to some extent passed on to producer and consumer prices. Therefore, exchange rate pass-through in this study is referred to as "the percentage change in consumer prices resulting from a one percent change in the exchange rate.

Exchange rate shocks are likely to be passed on to domestic inflations by both direct and indirect channels. The direct channel of exchange rate pass-through is through the import prices as follows.

The domestic currency price of the imported goods (PM) is represented by the equation (1).

\[
P_M = ER \cdot PX \tag{1}
\]

where ER is the exchange rate in terms of domestic currency per unit of foreign currency and PX the foreign currency of the imported goods. The imported goods consist of raw materials, capital goods and consumer goods. Therefore if PX remains fixed and ER depreciates, the domestic currency price of the imported goods will rise in proportion, and then tend to be delivered into consumer prices through the increases in production cost following the exchange rate depreciations as well as the increases in the prices of imported consumer goods. In reality, however, as exchange rate depreciates, exporters adjust their

\(^5\) The exchange rate is nominal effective exchange rate with yearly-varying import weight of Korea's major importing countries.
export prices in foreign currency. As a result, the pass-through of exchange rate to import prices tend to be incomplete.

The indirect channel of exchange rate pass-through refers to competitiveness of goods in international markets. The exchange rate changes give rise to changes in the aggregate demand and the aggregate supply through the changes in the relative prices between domestic goods and imported goods. On the aggregate demand side, exchange rate depreciations make the prices of domestic goods relatively cheaper for foreign buyers and domestic consumers. As a consequence, exports and aggregate demand will increase and then induce rises in the domestic price levels. On the aggregate supply side, if nominal wages are rigid in the short-run, real wages will decrease and output will increase. However when real wages will be bid up to their original level over time, production costs increase, the overall price level increases and output falls. Thus in the end, exchange rate depreciations leave a permanent increase in the price level with only a temporary (short-run) increase in output.

*Figure 2* displays the mechanism of direct and indirect channels of exchange rate pass-through to consumer prices above mentioned.

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6) Incited from Lafleche(1996), and Hüfner & Schröder(2002).
Taking exchange rate changes into account as above mentioned and following Campa and Goldberg (2000), I model the inflation equation in Korea as the following equation (2),

$$\text{cpi} = \beta_0 + \beta_1 \cdot \text{neer} + \beta_2 \cdot \text{gap} + \beta_3 \cdot \text{ip} + \beta_4 \cdot \text{ul} + \beta_5 \cdot \text{m2} + \epsilon_t$$  \hspace{1cm} (2)

where cpi, neer, gap, ip, ul and m2 represent consumer price index, nominal effective exchange rate, GDP gap, import price index, unit labor cost index and aggregate money supply, respectively and all variables except GDP gap are transformed into natural logarithms.

I estimate the exchange rate pass-through based on the behavioral equation (2) of consumer prices including monetary policy variable as well as demand and supply shocks which affect consumer prices. With nominal effective exchange rate, GDP gap is employed as a proxy for demand shock, and unit labor cost and import prices as proxies for internal and external supply shocks. Finally, aggregate money supply is used to incorporate central bank policy in the system. This inclusion follows the result of Parsley and Popper(1998). They find that taking into account monetary policy improves the estimation results of exchange rate pass-through. Since central banks that target CPI will try to insulate prices from exchange rate movements, neglecting their behavior should distort the true consequences of exchange rate variations. The observed relationship between prices and exchange rates would take into account the central bank behavior rather than the direct influence of exchange rates on prices.

One serious difficulty with the above approach is the potential endogeneity of several of the regressors in (2). In the case of small open economies, it is very likely that import prices(ip) will be endogenous with respect to nominal effective exchange rate(neer). Similarly, it may not be feasible to treat neer as being exogenous with respect to domestic price developments relative to those prevailing abroad. While these problems may not be as severe for the estimation of the individual industry equations of the type used in disaggregated studies, they become very serious when dealing with macroeconomic variables. When estimation is performed using single equation techniques these problems will lead to biased and inefficient coefficient and it is difficult to see any satisfactory way of resolving this issue under such circumstances.

Hence, the estimation should be treated with caution. Many studies make use of vector autoregressive regression as well as the Johansen procedure which employs a simultaneous equation maximum likelihood technique that allows for the estimation of more than one
equilibrium relationship among the data in question.\textsuperscript{7)}

Another recent methodology for uncovering such long-run cointegrating relationships is dynamic OLS developed by Stock and Watson\textsuperscript{(1993)}. It is this approach which is adopted in the next section.

\textit{3.2. Econometric Methodologies}

\textit{3.2.1. Unit root tests}

The classical regression properties hold only for cases where variables are stationary i.e. integrated of order 0, I(0). In general, however, most economic variables are time series which are integrated of order 1 or higher and hence non-stationary. Non-stationarity of economic variables involved in the analysis gives rise to violation of the classical assumptions of standard regression methods, and then to spurious regression results. However If certain linear combinations of I(1) variables are likely to be I(0) and amenable to OLS estimation, long-run relationships amongst the I(1) variables exist. In this case the variables are said to be cointegrated and OLS estimates of such cointegrated variables may be consistent in the sense of collapsing to their true values more quickly than if the variables had been stationary.

An interpretation of cointegrated variables is that they share a common stochastic trend. (Stock and Watson\textsuperscript{(1988)})

A necessary but not sufficient condition for cointegration is that each of the variables should be integrated of the same order or that both series should contain a deterministic trend. Therefore, prior to testing for cointegration, the degree of integration of individual variable under investigation need to be determined.

To this end, I perform unit root tests using augmented Dickey-Fuller(ADF) test and non-parametric Phillips-Perron(PP) test, both based on the null hypothesis that a unit root exists in the autoregressive representation of the time series. By employing quarterly data over 1980:1-2005:1 period, I do using the ADF test and PP tests on a series of regressions (including the trend) of individual series in level and first difference forms.

\textit{3.2.2. Cointegration}

Cointegration implies an error-correction model (Granger representation theorem),

\textsuperscript{7)} McCarthy\textsuperscript{(2000)}, Hütter and Schröder\textsuperscript{(2002)}, Leigh and Rossi\textsuperscript{(2002)} and Yi\textsuperscript{(2004)} use recursive VAR.
which is superior to modeling integrated data in first differences or in levels. (Engle and Granger (1987))

Various methods are also available for testing whether a model has appropriate co-integration properties. Before going on to explain the approach employed in this analysis, I briefly mention two of these methods. The first method is single equation approaches based on residuals from OLS estimates of the supposed long-run relationship. If the residuals are I(0), stationary, the model can be considered to be co-integrated and a valid long-run relationship exists among the variables. In the ADF cointegration tests, the appropriate null hypothesis is that the residuals have a unit root against the alternative hypothesis that the residuals are stationary. Where a cointegrating relationship cannot be found, no long-run relationship among the variables exist and the resulting regression may be spurious. Another cointegration test is to estimate dynamic short-run error correction model and test significance of error-correction variable.

The OLS approach, however, while simple to implement, has shown some weakness as follows. First, long-run parameter estimates can be biased in small samples and in the presence of dynamic effects, and this bias varies inversely with the size of sample and the calculated $R^2$. Second, when the number of regressors exceeds two there can be more than one co-integrating relationship. Then there is the problem caused by the likely endogeneity of the regressors, which would prevent OLS estimating the true values of the parameters. Finally step-wise procedure implies the compounding of errors. These flaws associated with the OLS approach have led to the development of alternative procedures, Johansen's maximum likelihood procedure. This approach is superior to the OLS in the various ways. First, the existence of at most one co-integrating vector is not assumed a priori. Second the Johansen procedure takes the regressors to be endogenous and applies VAR approach. Finally, a more powerful set of tests are provided which enable the number of co-integrating vectors to be identified and the effect of various restrictions to be evaluated. Implementing Johansen procedure in error-correction model is the following equation (3).

$$\Delta y_t = \delta + \sum_{i=1}^{k-1} \Gamma_i \Delta y_{t-i} + \Pi y_{t-k} + \epsilon_t$$  \hspace{1cm} (3)$$

where $y_t$ is a column vector of the m variables, $\Gamma$ and $\Pi$ represent coefficient matrices, $\Delta$ is a difference operator, $k$ denotes the lag length and $\delta$ is constant. Everything depends on the rank of $\Pi$ which provides the number of co-integrating vectors. For example, $r=1$ im-

---
plies that a single stationary relationship exists which can be taken as the long-run relationship. 8) Π can be decomposed of α′β′ where α is the speed adjustment coefficients of an error-correction model and β is matrix of long-run coefficients such that β′yt-k represents cointegrating relationship.

3.2.3. Dynamic OLS approach

An alternative approach, which has certain advantages over both the OLS and the maximum likelihood procedures, has been proposed by Stock and Watson (1993). Their method improves on OLS by coping with small sample and dynamic sources of bias. The Johansen method, being a full information technique, is exposed to the problem that parameter estimates in one equation are affected by any misspecification in other equations.

Dynamic OLS approach differs in the particular manner by which these estimators account for serial correlation among the residuals and whether parametric or non-parametric techniques are used to correct for endogeneity among the regressors. The potential of simultaneity bias among the regressors is dealt with by the inclusion of lagged and led values of the change in the regressors. While these are all single-equation methods for estimating cointegrating vectors, they share a common bond through the asymptotic distribution as FIML estimates. In this regard, asymptotically, they are optimal estimators.

Summing up, the Stock Watson method is a robust single equation approach which corrects for regressor endogeneity by the inclusion of leads and lags of first differences of the regressors, and for serially correlated errors by a GLS procedure. In addition it has the same asymptotic optimality properties as the Johansen distribution.

I employ the dynamic OLS method developed by Stock and Watson (1993) to estimate the parameters in (2). DOLS, as opposed to many other estimators, does not require that all the individual series in a long-term relationship be integrated of order one, that is, I(1), as it is also applicable to systems involving variables of differing orders of integration (Stock and Watson, 1993:783-4). In the case of I(1) series, this technique involves regressing one variable on the contemporaneous levels of the other variables and on the leads and lags of their first differences and a constant term as in the following equation (4).

8) If there are no linear combinations of y that are I(0), no cointegration exists, and therefore Π is full of zeroes, rank r=0 while if all variables in y are I(0), r=m. So, r ≤ (m-1) rows of Π form r linearly independent combinations of variables in y, each of which is I(0).
where $y_t$ is a dependent variable, $x_t$ is $m$ column vector of independent variables, $t$ is the length of lead and lag, $\delta$ is constant and $\epsilon_t$ is error term.

**IV. Data and Empirical Results**

4.1. Data

Data used in this estimation are as follows. The period covers from 1980Q1 to 2005Q1. For the dependent variable, CPI is the consumer price index (2000=100) at the aggregate level. As for the independent variables, I compute the nominal effective exchange rate (NEER) index with yearly-varying import weights based on the import value from major importing countries. They are expressed in Korean Won so that the increases in the NEER imply depreciations of Korean Won. In addition, I adopt demand and supply shocks, policy variable which affect domestic inflation. I employ GDP gap as a proxy for demand shock. The GDP gap is computed as the difference between GDP and potential GDP constructed with the Hodrick-Prescott (HP) filter. Unit labor cost and import price are used as proxies for supply shock. Unit labor cost (UL) are calculated by monthly earning (wage) indices divided by industrial production indices. Import price (IP) index (2000=100) is expressed in Korean Won. Aggregate money supply (M2) is used to model monetary policy. CPI, IP, M2, GDP, nominal exchange rates are retrieved from Economic Statistics System of Bank of Korea while monthly earnings data and some of nominal exchange rate data are obtained from International Financial Statistics of IMF.

All variables except GDP gap are transformed in natural logarithms and represented by small letters.

4.2. Unit root tests

Prior to testing for cointegration among the variables, the degree of integration of each

---

9) Korea’s major importing countries included in the calculation of nominal effective exchange rates are U.S, Japan, Saudi Arabia, China, Germany, Australia, Malaysia, Indonesia, Taiwan, Canada, U.K., Singapore.
variable need to be determined. To this end, I perform unit root tests using augmented Dickey-Fuller (ADF) test and non-parametric Phillips-Perron (PP) test (including constant terms) of individual series in both level and first difference forms by employing quarterly data over 1980:1-2005:1 period. Akaike Information Criterion (AIC) and Schwarz Bayesian Criterion (SBC) are both used for selecting the order of augmentation.

<Table 1> shows the results of Augmented Dickey-Fuller (ADF) and non-parametric Phillips-Perron (PP) unit root tests on the variables concerned. The results suggest that all variables in level except GDP gap are integrated of order 1, (I(1)), but they reject the null hypothesis that NEER, IP and UL in first difference and the GDP gap in level are non-stationary. Although ADF tests do not reject the null hypotheses of unit roots in first differenced CPI and m2 based on AIC, PP tests reject the null hypothesis at 1% level and ADF tests based on Schwarz information criterion instead of Akaike information criterion reject the null hypothesis at 1% level for CPI and 5% level for m2, respectively.

Taking these results into account, I decide to treat all variables except GDP gap as I(1) series, and GDP gap as stationary series.

Table 1. ADF and PP tests for unit roots

<table>
<thead>
<tr>
<th>Variable</th>
<th>ADF</th>
<th>PP</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>level</td>
<td>first difference</td>
</tr>
<tr>
<td>cpi</td>
<td>0.3851</td>
<td>-1.8824&lt;sup&gt;2)&lt;/sup&gt;</td>
</tr>
<tr>
<td>neer</td>
<td>-1.5797</td>
<td>-8.5022***</td>
</tr>
<tr>
<td>gap</td>
<td>4.8037***</td>
<td>-4.2409***</td>
</tr>
<tr>
<td>mfg</td>
<td>-2.2622</td>
<td>-9.4778***</td>
</tr>
<tr>
<td>m2</td>
<td>1.0445</td>
<td>-2.2422&lt;sup&gt;1)&lt;/sup&gt;</td>
</tr>
<tr>
<td>ul</td>
<td>-0.7973</td>
<td>-3.0056**</td>
</tr>
<tr>
<td>ip</td>
<td>-2.1758</td>
<td>-7.1006***</td>
</tr>
<tr>
<td>op</td>
<td>0.1239</td>
<td>-8.1505***</td>
</tr>
</tbody>
</table>

<sup>1)</sup> Lag lengths are selected based on the Akaike information criterion.
<sup>2)</sup> The ADF test statistics based on Schwarz information criterion (SIC) for first differenced CPI and m2 are -8.119619 and -3.032872 so that they are shown to be statistically stationary at 1% level and at 5% level, respectively.

*** indicates significance (rejection of null) at 1% level.

4.3. The results of Dynamic OLS Estimation

In order to identify the stationarity of a linear combination among the non-stationary variables, I perform the cointegrating tests based on Engle-Granger (1987) two-step approach. To this end, it is appropriate to estimate the equation (3) initially by OLS and then
perform unit root tests of the residuals from the OLS estimation using the ADF test and PP tests. Both ADF and PP tests reject the null hypotheses that the residuals are non-stationary at 1% significance level.\(^\text{10)}\) This finding validates that a linear combination among the non-stationary variables is shown to be stationary, which imply the cointegrating relationship among the non-stationary variables.

Once the existence of long-run stationary equilibrium among the variables is verified by the cointegrating tests, next step is to estimate the exchange rate pass-through coefficients.

Stock and Watson suggest the dynamic OLS(DOLS) procedure as a parametric approach for estimating long-run equilibrium in the systems which may involve variables integrated of different orders but still cointegrated. DOLS procedure basically involves regressing any I(1) variables on other I(1) variables, any I(0) variables and leads and lags of the first differences of any I(1) variables as the following equation (4)' from equations (2) and (4).

\[
\Delta y_t = x'\delta + \sum_{i=-l}^{l} a_i \Delta \text{lnneer}_{-i} + \sum_{m=-m}^{m} \psi_i \Delta \text{lul}_{-i} + \sum_{n=-n}^{n} \theta_i \Delta \text{lip}_{-i} + \sum_{p=-p}^{p} \zeta_i \Delta \text{lm2}_{-i} + \epsilon_t \quad (4)'
\]

where \(m=\{c, a, b, d, e, f\}\), \(x=\{1, \text{lnneer}, \text{gap}, \text{lul}, \text{lip}, \text{lm2}\}\) and \(l, m, n,\) and \(p\) are the lengths of leads and lags of the regressors.

Suppose that \(y_t\) has been found to be I(1) and at least some of the RHS variables I(1) or I(0), then DOLS estimates are obtained by regression analysis of the above equation.

According to Menon(1995), different results may stem from the use of different methodology, model specification and variable selection rather than from different time period covered. In order for this study to fit in with Menon's assertions, I estimate the equation(4)’ with different time periods and different variable selection as well. First, the exchange rate system has changed to the freely floating exchange rate system with the outbreak of the currency crisis on the fourth quarter of 1997 in Korea. So in order to investigate whether the exchange rate pass-through coefficients are affected by the change of the exchange rate system, I estimate DOLS equation (4)' for the two different periods; one for the whole period including the freely floating system and the other for the period from 1980Q1 to 1997Q3. Second, I estimate DOLS equation (4)' with different variable

\(^\text{10)}\) ADF test statistics (including no intercept and trend) are -2.6878 while critical value at 1% level is -2.5918 and PP test statistics (including no intercept and trend) are -4.9657 while critical value at 1% level is -2.5885.
selection. The (A) in <Table 2> includes gdp gap and import prices while (B) includes manufacturing operation ratio index(mfg) instead of GDP gap as a proxy of demand shock and oil price index(op) instead of import price index as a proxy of supply shock.

Stock and Watson DOLS estimates of the long-run parameters with all variables appearing in levels are reported in <Table 2>. This equation is estimated including up to i=±4 leads and lags. The results presented refer to a parsimonious version of the more general specification with only the insignificant lead and lag regressors omitted.

The results in <Table 2> show that all estimated coefficients have a prior expected signs and are statistically significant at 1% level except the import price coefficient for the period from 1980Q1 to 1997Q3. First, the results in (A) indicate that, even allowing for simultaneity bias, the exchange rate pass-through coefficients are 0.23 for the whole period and 0.12 for the subsample period from 1980Q1 to 1997Q3. This implies that if nominal effective exchange rates increase by 10 per cent, then consumer prices will increase by about 2.3 per cent in the long run for the whole period, comparing to some 1.2 per cent for the period of relatively stable exchange rate movements. That is, exchange rate fluctuations are more likely to influence domestic inflations. This finding support Taylor's conjecture that stable exchange rates tend to decrease the exchange rate pass-through to consumer prices.

Comparing the results by Yi(2004) who estimates the long-run equilibrium of consumer price behavior for the period from 1986.m1 to 2004.m3 and for the period from 1997.m12 to 2004.m3 using monthly data, the exchange rate pass-throughs in this study are much larger than Yi's even though Yi uses won/dollar nominal exchange rates.\(^{11}\)

Similarly, the impacts of import price changes on consumer prices is 0.22 for the whole period, comparing to 0.10 for the subsample period. The empirical results find that pass-through coefficients of external shocks such as exchange rate and import prices on the consumer prices become larger as the exchange rates move more freely and Korea economy integrates more into the world economy after the currency crisis.

Next the results in (B) [with manufacturing operation ratio index instead of GDP gap as a proxy of demand shock and oil price index instead of import price index as a proxy of supply shock] show that exchange rate pass-through coefficients are 0.19 for the whole period and 0.13 for the subsample period which are smaller than those in (A).

These larger pass-through coefficients imply that the effectiveness of the monetary policies within the inflation-targeting is very weak to external shocks. GDP gap has larger im-

\(^{11}\) Yi finds that the exchange rate pass-throughs are 0.07 for 1986.1-2004.3 and 0.097 for 1997.12-20047.3.
impact on domestic prices for the whole period including the post crisis than for 1980q1-1997q3 while unit labor cost and money supply has the reverse results.

The different result from those in (A) is that the influences of the demand shock on consumer prices remarkably become smaller from 0.70 for GDP gap to 0.25 for manufacturing operation ratio index for the full period while the influences reverse from 0.49 for GDP gap to 0.64 for the subsample period. The impact of oil price shocks on consumer prices are similar to those with manufacturing operation ratio index.

So I find that for the subsample period during which the changes in exchange rate and oil price are shown to be stable, internal shocks such as manufacturing operation and unit labor cost have larger influences on consumer prices while external shocks such as exchange rate and import prices do for the whole period.

Table 2. The results of DOLS Estimations

<table>
<thead>
<tr>
<th></th>
<th>(A)</th>
<th>(B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>neer</td>
<td>0.231(6.281***</td>
<td>0.120(5.375***</td>
</tr>
<tr>
<td>gap</td>
<td>0.698(6.582***</td>
<td>0.487(6.292***</td>
</tr>
<tr>
<td>mfg</td>
<td>0.133(19.980***</td>
<td>0.151(37.701***</td>
</tr>
<tr>
<td>ul</td>
<td>0.383(17.466***</td>
<td>0.408(37.14***</td>
</tr>
<tr>
<td>ip</td>
<td>0.218(5.830***</td>
<td>0.101(3.275)</td>
</tr>
<tr>
<td>op</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c</td>
<td>-0.997(-7.997***</td>
<td>-0.390(-3.240***</td>
</tr>
<tr>
<td>Adj. R2</td>
<td>0.997</td>
<td>0.999</td>
</tr>
</tbody>
</table>

To check the stability of the model, the cumulative sum of squares of recursive residual(CUSUMSQ) tests are conducted to investigate the stability of the model parameters because model stability is equivalent to parameter stability. In general, if the CUSUMSQ move out side the critical lines of 5% significance level, the null hypothesis will be rejected, meaning that the model is unstable. The tests are presented in <Figure 3> to <Figure 6>. <Figure 3> represents the model with gap and ip including the post currency crisis and is unstable so that it make difficult to interpret regression results. This may reflect the structural change after the crisis. But <Figure 5> for the whole period with mfg and op instead of gap and ip shows that the model is stable. The <Figure 4>and <Figure 6> show that the models are stable regardless the variable selection.
How Much Do Exchange Rate Shocks Matter For Domestic Inflations?

V. Conclusions and Policy Implications

I investigate the exchange rate and import price pass-through to domestic inflation in Korea. Using dynamic OLS, estimations are performed for the two different periods to see whether the adoption of more flexible exchange rate system does affect the exchange rate pass-through as well as with different variable selection. The results show that pass-through coefficients vary according to the period covered reflecting the change of the exchange rate system and to variable selection. For the whole sample period of 1980q1-2005q1, I find that exchange rate pass-through coefficients are 0.23 with gap and ip and 0.19 with mfg.
and its while for the period of 1980q1-1997q3, they are 0.12 and 0.13. The impact of im-
port prices on consumer prices is 0.22 for the whole sample period of 1980q1-2005q1
while it is 0.10 for the period of 1980q1-1997q3.

Since Korea has adopted freely floating exchange rate system after the outbreak of
currency crisis in the fourth quarter 1997, exchange rate volatility tend to increase. So the
above results support Taylor's conjecture that declines in exchange rate volatility play a
role in lowering exchange rate pass-through. More specifically, the adoption of more flexi-
ble exchange rate system in Korea lead to more exchange rate fluctuations, which tend to
have larger impact on consumer price inflations.

These results suggest that the effectiveness of the monetary policies within the in-
flation-targeting becomes modest as long as exchange rate fluctuations increase. Therefore,
to improve the effectiveness of the monetary policies within the inflation-targeting, the sta-
bility of exchange rate movements is required and then inflation-targeting monetary policy
to insulate the changes in domestic prices from external shocks will be effective.

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Current and Resource Situation on the World Market of Oil

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Today the most essential influence appears on such sensitive component of the world market, as the price.
Prognosing the prices for goods and services it is very important to define in due time and exactly the factors which are able to change the price policy: It is necessary to consider not only economic, but also psychological factors.
In present article it was made attempt to show serious changes on example the global market of oil.
The special attention is given a condition of the oil market in Russia, of prognosis and the analysis of prospects of its development.

I. Introduction

Experts testify: international oil market is shaking with fever, prices lost there stability and predictability. No one was expecting pinning on oil price over 70 dollar grade. Future prices increase cant be excluded, this can lead to age of very expensive prices on electricity. There is opinion, that this entire situation was created artificially. However, problem of valid prognoses exist and its necessary to find new reliable approach, allows seeing in perspective real picture on oil market. Especially well noticeably on example of oil prices, this includes maximum turbulence on market. Consequently we should know which factors determine spasmodic actions of price. First of all its drop in prices of American dollar, forehand calculated world prices on electricity, with inflationary processes also. Essential changes have took there place in the ratio within global demand and offer
on carbohydrates. Economic theory says: if product shipment doesn’t satisfy demand on them, temporary balance on market is reached at the expense of price increase. Question appears: If current high oil prices are reflection of physical lack of oil in the world. First of all, probably, it is needed to analyses situation with oil reserve. According to International electricity association in beginning of 2005 year world proven oil resources was more then 156 billion tons. It should be enough for about 45 years. In the interior of the Earth are 140-170 billion tons still not explored carbohydrates recourses and most of them located on territory of former USSR. Should notice, that besides oil, there are large deposits of ‘black gold’, however, shaft mining will be possible only with intrusion of new technologies. In the nearest 30 years even with global oil demand increase till 60%, there are plenty of time before lack of proven resources. As concerns of delivery of liquid fuel on world market, we can observe less monosynaptic situation. Formally, nowadays fuel offer satisfy demand. The world’s demand of oil according to International electricity association is 84.9 billion barrels. Balance of demand and supply have its place practically, however, significantly supplied by high-sulfur oil, due most demand is on low-sulfur oil. Why? In Asian-Pacific region, there is deficy of facilities that are able to desulfurise oil, and in developed countries ecological standards are too high. What’s why oil production plants have to increase prices of high quality raw materials.

One of main factors affecting oil supply is transportation. Particularly the tanker fleet deficy. This factor along with rapid growth of volume of oil transportation and the complicated situation on the major transport channel lead to increasing freight price in several times. Moreover, according to demand of International Sea Organisation, in 2007 all tankers should have two decks. That’s why the current tanker fleet needs to be upgraded, that will surely lead to changing the level of oil prices. In 2004 the world demand of new tankers was more than one thousand, with general deadweight of 88 million tons. This numbers make up 27% of existing tanker fleet.

In future trends the balance between demand and supply of oil can become more fragile. According to IEA in 2020 the global demand of liquid fuel will be about 115 million of barrels per day, and in 2030-120 million. With the oilfields of Gulf of Mexico, Alaska and North Sea becoming impoverished and due to the decreasing of exploring works and lowering the level of oil income due to lack of investments, the main source of hydrocarbon will transit to the countries and regions of the Third World-Nigeria, The Middle East, Venezuela and others.

All this will lead to strengthening the role of OPEC. The following countries control
Current and Resource Situation on the World Market of Oil

more than 40% of the world oil production, more than 50% of world oil trading, up to
11% of oil refinery and owns the 6% of world tanker fleet. This countries have 3/5 of all
explored world oil supplies. They think that this numbers will only grown in future. That’s
why OPEC in nearest future will become a strong systematizing factor, which will de-
termine the not only the level of prices, but the general situation on the world oil market.
Current distabilisation in some OPEC countries will affect the prices and shipments of oil.
All these factors influence at the first place the prices of the raw oil. But oil consumers
are interested in the prices of oil production products. The severe disbalance in this sphere
influenced the level of prices of mineral oil, and also become one of the factors of current
tensity of the world market. In particular the lack of oil production facilities leads to dis-
tabilisation of the market. For the latest 10-15 years the growth of new facilities in oil re-
fining significantly reduced. One of the reasons of it is new ecological standards for oil re-
fining, which make building new facilities and modernisation of the old ones far more
expensive. As a result the world market suffers the lack of such types of fuel as gasoline,
diesel oil and aviation fuel. The investment cycle in this sphere of business is quite long,
and it clearly shows the deficit of refinery products. For example the collapse of 12 refin-
ery facilities in USA, during Katrina hurricane in 2005, negatively affected the prices. And
these 12 facilities make up only 8% of american oil refinery. These facts show that new
effective economical decisions for stimulating the companies for steady rasing of refinery
facilities are needed.

Considering the prices on the world market, we can also see the other factors affect-
ing their current level. One of them is current tax policy of industrially developed coun-
tries which are the main oil consumers. According to OPEC in Great Britain the taxes
make up to 62% of the final gasoline price. The other 38% is profit, 23% of which go to
countries exporting oil and 15% go to oil companies. In USA tax part in final price is
24%, in France and Germany-58%. These numbers show that the instruments for lowering
the oil price for the final consumers are in hands of the countries that export and import
oil. Along with oil refinery sphere world oil market is also affected by futures contracts.
Two decades ago their amount was about 5 billion dollars. And serious growth wasn’t
expected. But nowadays there are lots of people involved in future contracts: traders, spec-
ulators, hedge funds, institutional investors and so on. The total amount of sales is about
one trillion dollars. The speculative futures sales is about 10 times more than the real
amount of oil produces and consumed it the whole world.

As a result futures transformed from the secondary oil selling instrument into powerful
institution, which directly affect the fundamental characteristics of the oil market. Due to this, oil market is no longer just a market of some physical good, and it’s prices don’t follow common economical laws. Well-known system, in which higher prices are followed by high investments, which help the production growth, and conformably lead to lowering prices, now doesn’t work ideally. The world oil market keenly reacts not only on change of balance of demand and supply, but also on psychological aspect of market members. All this lead to even more flexibility of oil prices and also it increased the amplitude of it’s oscillation, and made it more vulnerable to speculative games.

In the latest 10-15 years at the global market of energy supply sources Chinese and Indian firms began to play a major role. They have constantly growing demand for hydrocarbon and are struggling for reliable oil suppliers.

These countries are rapidly developing and aloudly influence the world oil market. In 1990 the consumed about 3.5 billion of barrels per day, that was about 5% of total world oil demand, and in 2005 this numbers grew to 13%. As a result China became the second world biggest oil consumer (after USA), that made 8,1%. China imports about a half of hydrocarbon they use it total.

The world forecasts show that in future the need of China and India in energy supplies will only grow. In 2004 the level of oil consumption in China increased by 15% and in 2005 it’s growth will be about 9%. According to Department of Energy of USA in 2025 China will consume about 14.2 million barrels per day, that’s about 2 times more than in 2005.

In order to satisfy their growing demand for oil, China and India became to compete to get reliable supplies. On of examples is that in 2005 China was able to take over oil company Petrokazakhstan for 4,3 billion dollars, and China’s competitor was Indian company. In urge to satisfy their growing demand for oil, Chinese companies begin to invest money in oil and gas companies abroad. Lately total investments of China in oil in gas production abroad made up more than 40 billion dollars. As for India their total investment made up 3,5 billions.

It is expected that as further economical development of China and India will take place, their struggle for oil supplies will be more and more severe, and it will affect world oil prices greatly. Due to strategic meaning of this sector of economy, it will be never able to get balanced, because of constant changes. Oil price will behave unpredictable, with lot’s of bounds and fluctuation, whiping up the price turbulence.
II. Experimental

The world oil prices depend on clarity and openness of export. This also right, because the price of the barrel of Russian oil brand Urals is about 6 dollars lower than price of Brent oil. It is possible to technically and economically prove that this discount is not valid, and the demand for oil is not decreasing. According to Prime Minister Fradkov in Khanty-Mansiysk region of Russia, the tempo of oil production increase can be called satisfactory. But there is no clear motivation to start oil reconnaissance or exploring works; and moreover the level of modernisation of production facilities is quite low, and the volume of investments is not enough also.

According to source in Russian government, the growth of explored supplies of oil is not enough to fill up the current level of production, and also the situation with explored oil fields is getting worse too. This conditions can lead to the situation, that in 2010 the part of highly productive supplies will decrease from 45% to 30%. And this situation can threat the economical security of Russia. It is needed to create such circumstances that decisions worked out by the government and business community will be the result of consensus communications.

According to the leader of near-government firm “Surgutneftegaz” in the nearest future the situation with oil production in Russia can become worse and in 2007 production decrease can take place. In nearest future the need in well-boring will increase in 3 times, and Russian industry is not able to produce enough equipment for it.

The leader of “Rosneft” believes that the new law “About entrails” is needed. It should introduce so-called transparent licenses—the company leading exploring works in case of finding new oil field will automatically get a right to start exploration. It is also vital to to correct some criteria of defining the term of strategic oil fields, and the access of foreign firms to them should be restricted. Besides, there are ideas that oil fields in Eastern Syberia should be liberated from taxes, due to extremely high amounts of investments that are needed to start explorations. Eastern Syberia and Far East need some preferences. Some Japanise analysts say that the explored supplies of oil in Eastern Syberia is not enough for guaranteed shipments of 80 million tons yearly—30 millions in China and 50 millions in Japan.

Russian Government believes, that oil branch of industry has to serve as a key source of development of the country, to help to develop social sphere. This problem is set by Gazprom for “Sibneft”, due to reassessment of part of taxes of this company for other re-
regions, although it will be registered in St. Petersburg (it was registered in Omsk before). The budget of Omsk Region will now depend on Omsk oil refinery plant, which is ought to provide social support of the region and to guarantee the fulfilment of budget in this region.

It is needed to mention that nowadays, the government withdraw superprofit of oil companies, and such fate will probably occur to Gazprom aswel, although it’s profitability in inner market is quite low.

Despite of lot’s of debts, “Rosneft” still tries to buy actives connected with oil production. It bought share holding of “Verhnechounskneftegaz” from “Interros” and is going to develop technical side of the project, connected with oil production. According to account the capital costs for the first half of 2005 increased by 2,4 times, and made up 881 billion dollars (365 millions in the same period in 2004). It consisted of two main parts-“exploring and extraction”- 761 million, and “oil production and sales”-88 millions in comparison with 105 millions in 2004. The amount of oil production in first half of 2005 made up 35,54 million tons. The company plans to maintain the growth of production at the level of 5-7% a year till 2012. The production of “Uganskneftegas”, bought by company, will make up 56 tons of oil. (51,8-in 2004)

Lately some oilfields in Western Kazakhstan began to attract attention of russian holding “Lukoil” The total oil supplies make up about 270 million of barrels-26 million tons. Chinese offers can be more attractive, but “Lukoil” managed to buy 100% of shares of Nelson Resources Limited, which is operating in Kazakhstan.

The interest to the further search of the hydrocarbon supplies lead to the fact, that one of the richest russian companies-“Surgutneftegaz” is going to operate at russian shelf zones, along with Norwegian company Statoil, which has a rich experience working at sea. The increased oil shipments to Statoil will be made via Primorsk port since 2006. According to Ministry of Nature of Russia, the starting resources of russian shelf make up more than 100 billion of tons, including 11 billion tons of industrial supplies. The main arctic shelves are-Prirazlomnoe and Shtokmanovskoe.

Ministry of Nature suggests to grant access to investors, using the principle of two-leveled outline—at first they study financial state, technological abilities, experience of operating in Russia, and then they will study the assumed volume of investments and the times of putting into operation. Taking into consideration that “Rosneft” doesn’t have enough experience in shelf oil production, Ministry of Nature suggest to create special national company, which will be forming polls for shelf works. Most likely “Surgutneftegaz”,
which has about 13 million dollars free actives and has some experience cooperating with foreign companies, can count on this place.

III. Results and Discussion

Indian minister of oil and gas, taking in consideration the role of hydrocarbons in solving world security problems, nominated himself for becoming a leader of transation oil and gas dialog, emphasizing the need of the fastest creating of the united oil and gas network. He said that there is interdependency in relations between producers and consumers, they both need strong markets, and they both should make investments in exploring, producing, building facilities, transportations and development of producing facilities, including petrochemical plants. By this it is possible to develop mutual relations between different countries, and to cerate real energetical security. This plan of asian cooperation can become the beginning of asian network of modern global economy-The Great Silkroad of the 21 century.

India, according to it’s minister, is ready to invest any oil and gas projects in Russia, taking in consideration russian laws, including the future law “About entrails”. India is ready to work in Eastern Syberia, Caspian, and in some regions Barents sea. It is expected, that after restructuring the energetical field of industry, lot’s of joint projects will appear in Russia, India, China and Third World countries.

It is necessary to mention, that from position of Russia, the competition between India and China really takes place, but it is based on friendly relations. For example, the largest chinese company CNPC made an agreement with indian firm ONGC, about joint participation in tender for the right of oil production in Siria, and they are ready to buy 40% of shares of Sirian firm El-Furat, which produces about 50% of oil in the whole country. Before this chinese company won over indian ONGC in buying actives in Kazakhstan and Ecuador.

IV. Conclusions

The law “About entrails” is vital. In it firstly the criteria of criteria of defining the term of strategic fields-they are districts and supplies, which contain more than 150 million
tons of oil, more than 1 trillion of cubic meters of gas, more than 700 tons of gold, and more than 10000 tons of copper. There are 5 such districts in Russia, which are situated in undistributed zone. The law suggest that strategic field can only be exploited by company that has not less that 50% of russian capital. And this plays a strategic role in russian economy, because oil supplies are not endless.

So, there are some serious problems on the oil market, especially in sphere of exploring, in amounts of taking from wells, and oil refinery. In our opinion, in order to solve this problem, it is needed to create hi-tech zones, where the fundamental innovative problems, of high level of economical and technical completeness, will be in strongly worked out. It is necessary to introduce new sources of energy, which will be discussed in next article

Preferences

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China’s Image as a Tourism Destination in Korea*

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Tourism image is critical for the success and competitiveness of any destination. Recent trends in Korea outbound travel market, visitors to mainland China were steadily increased. Korean tourists are one of the key source market for China. This paper is designed to understand the attributes influencing Korean potential tourists’ perceived destination images and find out the current images of China in Korean students who is the potential customers for China inbound tourism market. Respondents were asked to rate the attributes for both importance and performance. The results were analyzed and discussed by the IPA and Regression analysis.

1. Introduction

The number of Korean outbound tourists increased by 215% from 1.21 million in 1989 to 3.81 million in 1995. The year of 1995 was the first time Korean outbound travelers outnumbered inbound foreign visitors (3.75 million). In 2004, total 8.82 million Korean people traveled overseas and the number of travelers to mainland China increased by 49% over the same period of 2003, and reached 2.33 million. As more Koreans travel abroad, more Korean travelers visit China. Korean travelers increased by 400 % from 584,487 in 1997 to 2,334,781 in 2004. In 2000, Korea ranked 2nd place as a foreign visitor to China after Japanese travelers. Korea-China, the two countries economic relationship will be increased in many aspects. The relationship especially, in the tourism industry has enormous growth potential. Now China is being faced the 2008 Summer Olympic Games in Beijing and 2010 Shanghai World Expo. New 24 hotels are under construction in Beijing. China’s economic growth and open-door policy are both sending more Chinese

* This Research was supported by Nam Seoul Research Grant 2005
tourists to foreign countries and attracting more foreign tourists to China. Under this circumstance, China’s images as a tourism destination, perceived by Korean people is somewhat curious to us. Tourism destination competitiveness and longevity is becoming an interesting and important area of tourism development. As competition intensifies, it will become increasingly important that destination develop the type of touristic products most in demand by their main consumer groups. Thus it becomes ever more important to understand foreign travelers’ perception of destination. Understanding travelers insofar as what they perceive, what they prefer, and how they make decisions is essential for effective marketing. According to the push and pull theory (Crompton, 1979; Uysal and Jurowski, 1993), tourists’ motivation relates to the pull factors attracting tourists to the destination. These pull factors are, in essence, tied to tourists perceived image of a destination. Thus understanding tourists’ perceived images should help better comprehend tourist motivation. Understanding perceived image and inner motivation help researchers better understanding tourists’ behavior-related issue. In this paper, we try to find out the important destination attributes of China for Korean students and also examine how Korean students rate China’s performance. Finally, the China’s images held by those who of students in Korea are examined using perceptual mapping.

II. Review of Related Literature

2.1. Destination Image

Image is the sum of beliefs, ideas, and impressions that people have of a place or destination (Kotler, Haider, and Rein, 1993); an overall impression with some emotional; a perceptual phenomenon that formed through consumers’ reasoned and emotional interpretation and it has both cognitive (beliefs) and affective (feelings) components. Understanding tourists’ destination image help destination marketers identify a location’s strengths and weaknesses and also providing critical insights on service delivery and product development. Echtner and Ritchie (1991, 1993) have proposed a conceptual framework for destination image consisting of three continuums: (1) attributes-holistic, (2) tangible(functional)-intangible(psychological), and (3) common-unique. Destination image is considered to consist of perceptions people possess of individual attributes and elements based on holistic impressions, including a mental picture of physical characteristics and general
feeling or atmosphere. Individual attributes include tourist sites, national parks, historic sites, beaches, cleanliness, culture, hospitality, opportunity for adventure, and so on. All these elements are lied in the continuum of functional (more tangible) versus psychological (more intangible) characteristics. Attributes containing functional characteristics include tourist activities, historic sites, entertainment, and transportation; while psychological attributes involve hospitality, atmosphere, reputation, opportunity to increase knowledge, and quality of service.

Some researchers assessed the magnitude of the tourists’ image of destination used two sets of attributes in regard to designative and evaluative images set (Baloglu & Brinberg, 1997; Walmsley & Young, 1998). Designative attributes related to the perceptual and cognitive component of image, while evaluative attributes deal with the affective component of image. The advantages of using designative versus evaluative attributes is that the designative attributes, such as friendly people and good infrastructure, provide more concrete, interpretive meaning regarding uniqueness of a destination, which helps marketers to develop actionable positioning strategies. On the other hand, the evaluative image attributes, such as pleasant and arousing, are rather abstract and vague.

Crouch and Ritchie (1999) approached to tourism destination competitiveness with the four major sets; core resources and attractors, supporting factors and resources, destination management, and qualifying determinants. Core resources and attractors constitute the primary elements of destination appeal and include physiography, culture and history, market ties, activities, special events, and tourism superstructure. Physiography embraces landscape and climate, market ties includes linkages with the residents of tourism originating regions, and tourism superstructure is comprised primarily of accommodation facilities, food services, transportation facilities and major attractions. Supporting factors and resources include a destination’s general infrastructure, accessibility, and human resources. Destination management comprise marketing of the destination, quality of service and information systems. Qualifying determinants include destination location, safety and overall costs. Table 1 provide the selected 24 attributes of destination images studies.
Table 1. Literature Review on Tourism Destination Image & Selected Attributes

<table>
<thead>
<tr>
<th>Code</th>
<th>Attribute</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Availability of quality accommodations</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>Many interesting places to visit</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>Shopping</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>Inexpensive services &amp; goods</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>Entertainment</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>Similar lifestyle/Way of life</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>G</td>
<td>Overall quality of travel service (tourist information, transportation)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>H</td>
<td>Overall price levels</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>Low travel cost</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>J</td>
<td>Cleanliness</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>K</td>
<td>Quality restaurant</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>L</td>
<td>Cuisine (food &amp; drink)</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>Personal safety</td>
<td>0</td>
<td>0</td>
<td>0</td>
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</tr>
<tr>
<td>N</td>
<td>Crowding</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>O</td>
<td>Political stability</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P</td>
<td>Atmosphere (different &amp; fascinating)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Q</td>
<td>Opportunities for adventure</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>R</td>
<td>Opportunities to increase knowledge</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S</td>
<td>Natural &amp; scenic beauty</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>T</td>
<td>Nice climate</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>U</td>
<td>No language barriers</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V</td>
<td>Overall service quality</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W</td>
<td>Plenty of cultural/historic places</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>X</td>
<td>Interesting festivals &amp; special events</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

A : Sinead O’Leary and Jim Deegan (2005)
D : Joseph S. Chen (2001)
E : Joseph S. Chen and Cathy H. C. Hsu (2000)

2.2. Important-Performance Analysis (IPA)

Originally IPA applied to the service department of an automobile dealer, the employment of this technique has spread into various fields. It has been applied to health care market (Cunningham and Gaeth, 1989), banking service (Ennew, Reed, and Binks, 1993), the hotel industry (Martin, 1995), tourism policy (Evans and Chon, 1990), tourist destination (Uysal, Howard, and Jamrozy, 1991), and tour operator (Hudson, Hudson, and Millier,
In an empirical study of meeting destination of Beijing, IPA was employed to reveal the factors devote its attention and resources to attract international meetings (Go, & Zhang, 1997). One of the major benefits of using IPA is the identification of areas for service quality improvements. Results are displayed graphically on a two dimensional grid and, by a simple visual analysis of this matrix, decision makers can identify areas where the resources and efforts need to be concentrate.

**Figure 1. Importance-Performance Grid**

IPA uses a three steps process either to develop a new strategy or to evaluate an existing strategy. First, a set of product attributes or features is identified through literature review or focus interview. Second, respondents are asked two questions about each attribute. One question is regarding importance of attributes and the other is performance of attributes. Third, importance and performance scores for each attribute are calculated. The calculated importance scores are plotted on vertical axes, and performance scores are plotted on horizontal axes.

**III. Method**

**3.1. The Survey**

This Survey was conducted to the junior and senior students of Hotel and Tourism department of Namseoul University. At first, respondents were asked to rate the relative imp-
portance of the attributes. And students were asked to submit the report titled as the tourism of China by one week later. In second phrase, the respondents were asked to submit the report regarding the Tourism of China by one week later. This method is somewhat strange but the most of students have no experiences of visiting China before. But the comparison between pre-visititation and post-visititation was employed many previous studies (O’Leary and Deegan, 2005). In third phrase, the respondents were asked to evaluate the same attributes of destination tourism image. Respondents were asked to show the extent of their agreement or disagreement with 24 image related items on a 5-point Likert scale (1=strongly disagree, 2=disagree, 3=neither, 4=agree, 5=strongly agree). The survey was carried during the October of 2005. The pre-educated research assistant visited several classes and explained the purpose of this research. The attribute Hospitality/Friendliness was excluded because all the respondents had never actually met the Chinese people during a week. Total 220 questionnaires were distributed to the junior and senior students. After respondents completed the questionnaire, research assistant reviewed every of it. So a total of 219 questionnaires were completed.

3.2. Questionnaire and Variables

The questionnaire consisted two parts of section. The first part asked respondents to rate the perceived images. At first, 25 attributes were considered but the item of hospitality/friendliness was excluded because respondents actually could not perceive the hospitality of local Chinese people. So finally, 24 image attributes were employed and asked. These 24 image attributes are abstracted from the several related studies, especially O’leary, and Deegan(2005), Enright, and Newton(2005), Suh, and Gartner(2004), and Chen, and Hsu(2000). In the second part, sociodemographic information of respondents was involved.

IV. Results

4.1. Importance of Destination Attributes

A comparison between the importance attached to certain attributes when think about China as a tourism destination and China’s performance after searching China tourism information will provide detailed information. Table 3 shows that importance-performance
ratings of the students perceived tourism image of China. The mean score of importance rating is 3.1166 and 14 attributes of total 24 attributes are exceed the mean score. The attributes that are ranked in a higher position than mean score are showed in Table 2. This reveals that respondents perceived China’s image as plenty of cultural/historic places, inexpensive services & goods, many interesting places to visit, low travel cost, natural & scenic beauty, crowding, opportunities to increase knowledge, interesting festivals & special

Table 2. Importance - Performance Comparison

<table>
<thead>
<tr>
<th>Code</th>
<th>Attribute</th>
<th>Importance</th>
<th>Performance</th>
<th>Rank</th>
<th>Rank</th>
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<tr>
<td></td>
<td></td>
<td>Mean</td>
<td>S.D.</td>
<td>Mean</td>
<td>S.D.</td>
</tr>
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<td>Availability of quality accommodations</td>
<td>2.7489</td>
<td>0.7990</td>
<td>15</td>
<td>3.3333</td>
</tr>
<tr>
<td>B</td>
<td>Many interesting places to visit</td>
<td>3.9954</td>
<td>0.8377</td>
<td>3</td>
<td>3.9224</td>
</tr>
<tr>
<td>C</td>
<td>Shopping</td>
<td>3.3744</td>
<td>1.0211</td>
<td>12</td>
<td>3.3822</td>
</tr>
<tr>
<td>D</td>
<td>Inexpensive services &amp; goods</td>
<td>4.0411</td>
<td>0.9736</td>
<td>2</td>
<td>4.0548</td>
</tr>
<tr>
<td>E</td>
<td>Entertainment</td>
<td>3.6755</td>
<td>0.9120</td>
<td>9</td>
<td>3.9315</td>
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<tr>
<td>F</td>
<td>Similar lifestyle/Way of lifestyle</td>
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<td>1.0073</td>
<td>15</td>
<td>3.1735</td>
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<td>0.9433</td>
<td>20</td>
<td>3.0374</td>
</tr>
<tr>
<td>H</td>
<td>Overall price levels</td>
<td>3.5160</td>
<td>0.8314</td>
<td>10</td>
<td>3.6256</td>
</tr>
<tr>
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<td>Low travel cost</td>
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<td>0.7985</td>
<td>3</td>
<td>3.7763</td>
</tr>
<tr>
<td>J</td>
<td>Cleanliness</td>
<td>1.7717</td>
<td>0.8846</td>
<td>24</td>
<td>2.6758</td>
</tr>
<tr>
<td>K</td>
<td>Quality restaurant</td>
<td>2.3242</td>
<td>1.0226</td>
<td>20</td>
<td>3.0502</td>
</tr>
<tr>
<td>L</td>
<td>Cuisine (food &amp; drink)</td>
<td>3.4201</td>
<td>1.0257</td>
<td>11</td>
<td>3.6941</td>
</tr>
<tr>
<td>M</td>
<td>Personal safety</td>
<td>2.1735</td>
<td>0.9419</td>
<td>23</td>
<td>2.6347</td>
</tr>
<tr>
<td>N</td>
<td>Crowding</td>
<td>3.8311</td>
<td>1.1706</td>
<td>6</td>
<td>3.3621</td>
</tr>
<tr>
<td>O</td>
<td>Political stability</td>
<td>2.5799</td>
<td>0.9020</td>
<td>17</td>
<td>3.0228</td>
</tr>
<tr>
<td>P</td>
<td>Atmosphere (different &amp; fascinating)</td>
<td>3.2782</td>
<td>1.0491</td>
<td>14</td>
<td>3.2922</td>
</tr>
<tr>
<td>Q</td>
<td>Opportunities for adventure</td>
<td>3.2877</td>
<td>1.0939</td>
<td>13</td>
<td>3.4120</td>
</tr>
<tr>
<td>R</td>
<td>Opportunities to increase knowledge</td>
<td>3.6986</td>
<td>1.0407</td>
<td>7</td>
<td>3.8950</td>
</tr>
<tr>
<td>S</td>
<td>Natural &amp; scenic beauty</td>
<td>3.9132</td>
<td>1.0077</td>
<td>5</td>
<td>4.0411</td>
</tr>
<tr>
<td>T</td>
<td>Nice climate</td>
<td>2.4658</td>
<td>0.8791</td>
<td>19</td>
<td>2.8219</td>
</tr>
<tr>
<td>U</td>
<td>No language barriers</td>
<td>2.1963</td>
<td>1.1016</td>
<td>22</td>
<td>2.6164</td>
</tr>
<tr>
<td>V</td>
<td>Overall service quality</td>
<td>2.5205</td>
<td>0.8951</td>
<td>18</td>
<td>3.0365</td>
</tr>
<tr>
<td>W</td>
<td>Plenty of cultural/historic places</td>
<td>4.1461</td>
<td>0.8276</td>
<td>1</td>
<td>4.1562</td>
</tr>
<tr>
<td>X</td>
<td>Interesting festivals &amp; special events</td>
<td>3.6621</td>
<td>1.0023</td>
<td>8</td>
<td>3.8676</td>
</tr>
<tr>
<td></td>
<td>Total Score</td>
<td>74.8084</td>
<td>82.5406</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mean</td>
<td>3.1166</td>
<td>3.4391</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
events, entertainment, overall price levels, cuisine (food & drink), shopping, opportunities for adventure, and atmosphere. One the other hand, the mean score of performance rating is 3.4391 and 10 attributes of total 24 are exceed the mean score.

Respondents changed perceived China’s image could be explained by the following 10 attributes were ranked more higher than the mean score of performance. Plenty of cultural/historic places, inexpensive services & goods, Natural & scenic beauty, Entertainment, Many interesting places to visit, Opportunities to increase knowledge, Interesting festivals & special events, Low travel cost, Cuisine, Overall price level.

4.2. Importance-Performance Analysis

The interpretation of the IPA of China’s image of Namseoul university students as a tourism destination is graphically presented on a grid divided into four quadrants as shown in Figure 2. The two dimensional action grids can be formed, importance values forming the vertical axis, while performance values forming the horizontal axis. The placement of each attribute on the IPA grid was determined by using the means of importance and performance. 4 attributes are plotted at the quadrant I, concentrate here; (C) Shopping (N) Crowding (P) Atmosphere (Q) Opportunities for adventure. There are also 10 attributes at quadrant II, keep up the good work; (B) Many interesting places to visit (D) Inexpensive services & goods (E) Entertainment (H) Overall price level (I) Low travel cost (L) Cuisine (R) Opportunities to increase knowledge (S) Natural & Scenic beauty (W) Plenty of cultural/historic places (X) Festivals & Events. At quadrant III, low priority; 10 attributes are plotted; (A) Quality accommodation (F) Similar lifestyle (G) Overall quality of travel service (J) Cleanliness (K) Quality restaurant (M) Personal safety (O) Political stability (T) Nice climate (U) No language barrier (V) Overall service quality. The attributes within Keep up the good work quadrant indicates that the whole tourism image of China. Namely, it can be abstracted four key aspects; Places-interesting, historic, cultural, scenic, and taste, Entertainment-festival & events, Cost-inexpensive, low travel cost, Knowledge. The attributes in the Concentrate here quadrant showed that the image of China to young students rather stillness, similarity than dynamic, exotic atmosphere. Respondents, at first, perceived China was somewhat crowding but after tourism information search, they felt less crowd compare to their first expectation. China’s image is highly related with inexpensive services & goods but respondents less agreed with the image of shopping. This means respondents consider not only monetary cost but also the quality.
Figure 2. Importance-Performance Analysis

Multiple regression analysis of important attributes of China’s image has been used to investigate the meaningful attributes for overall attractiveness of China. Table 3 showed that the major predictors of the overall attractiveness of China were opportunities to increase knowledge, many interesting places to visit, shopping, service quality, adventure, natural & scenic beauty, and political stability.
Table 3. Multiple Regression Analysis for the Effect of Important Attributes on Overall Attractiveness

<table>
<thead>
<tr>
<th>Code</th>
<th>Independent Variable</th>
<th>Beta</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>R18</td>
<td>Opportunities to increase knowledge</td>
<td>0.445103</td>
<td>5.361</td>
<td>0.0000</td>
</tr>
<tr>
<td>B2</td>
<td>Many interesting places to visit</td>
<td>0.371776</td>
<td>4.012</td>
<td>0.0001</td>
</tr>
<tr>
<td>C3</td>
<td>Shopping</td>
<td>0.286658</td>
<td>3.721</td>
<td>0.0003</td>
</tr>
<tr>
<td>V22</td>
<td>Overall service quality</td>
<td>0.253727</td>
<td>2.710</td>
<td>0.0073</td>
</tr>
<tr>
<td>Q17</td>
<td>Opportunities for adventure</td>
<td>0.246722</td>
<td>2.675</td>
<td>0.0081</td>
</tr>
<tr>
<td>S19</td>
<td>Natural &amp; scenic beauty</td>
<td>0.216923</td>
<td>2.612</td>
<td>0.0035</td>
</tr>
<tr>
<td>O15</td>
<td>Political stability</td>
<td>0.197232</td>
<td>2.162</td>
<td>0.0318</td>
</tr>
</tbody>
</table>

Ⅴ. Conclusion

Students in Namseoul University, Korea located the following 10 attributes in the keep up the good work quadrant; many interesting places to visit, inexpensive services & goods, entertainment, overall price level, low travel cost, cuisine, opportunities to increase knowledge, natural & scenic beauty, plenty of cultural/historic places, and festivals & events. This means that respondents considered these attributes as important and also satisfied with these attributes. The location of attributes within keep up good work quadrant represents the current China’s image as tourism destination simply as historic, natural beauty, cuisine, interesting festivals, exploring ancient or oriental knowledge, inexpensive, entertainment.

The IPA score indicated that China need to improve the following 4 attributes immediately to attract more potential tourists; shopping, atmosphere, crowding, and adventure. All these attributes are considered somewhat important but not satisfied with. Students perceived that the overall price level and travel costs are one of the strong points of China but shopping is somewhat unsatisfied attributes. Regarding atmosphere, China shared her borders with Korea for centuries, this means that China is not a strange country for Koreans. Respondents consider China rather a neighbor country (stillness) but exotic (curiosity). Respondents are young students and they usually seek for adventures for a challenge when they visiting foreign countries. Regarding the attribute of opportunities for
China’s Image as a Tourism Destination in Korea

adventure, China is lack of this adventure factors to Korean students. China have to encourage the young tourists to visit China for venturesome reasons. The attribute of opportunity to increase knowledge is the most predictable and important for the evaluating of overall attractiveness of China. To enhance the overall attractiveness of China to Korean college students, consider opportunities to increase knowledge, many interesting places to visit, shopping, opportunities for adventure, natural & scenic beauty, and political stability as important factors. The limitations of this study are obvious. The survey sample was limited only to college students of Namseoul University and this may weaken the generalizability of this study. Further researches should need to examine the differences of images in cross-nation’s perceptions and market segmenting by images attributes.

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Evans, M.R. and Chon (1990). Formulating and evaluating tourism policy using importance-per-


The Application of the Fingerprint Encryption Technique in E-Commerce

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Information security is an important factor of the electronic commerce (e-commerce for short) services. A security strategy based on fingerprint encryption technique used in e-commerce is presented. The flow of the encryption technique is introduced. With the increasingly maturation of the fingerprint identification technique, fingerprint encryption technique has been successfully used to ensure the information security of the e-commerce.

Key words: E-commerce, Information Security, Fingerprint Identification, Encryption Technique

I. Introduction

E-commerce was first developed in the 1970s, when the EDI (Electronic Data Interchange) was the most advanced technology in the field. In the 1980s, no-paper commerce was sprung up. Since the Internet appeared in the 1990s, e-commerce developed quickly. That is to say that the development of e-commerce passed two phases: 1) From 1960s to 1990s, it was the e-commerce based on EDI. 2) From 1990s to nowadays, it was the e-commerce based on Internet.

The definition of e-commerce is to use the electronic communication to do business. It is a method for companies to create and operate their business in new and efficient ways. It means to use simple, fast and low-cost electronic communication to transact, without face to face meeting between the two parties of the transaction. The types of e-commerce include Business to Business (B2B), Business to Consumer (B2C), and Business to Government (B2G), and so on.

With the wide use of computer, the maturity and the wide adoption of Internet, e-commerce has become a familiar part of our lives: we withdraw cash from automatic
machines and check out account balances by phone, etc. As more and more people use e-commerce by Internet, serious security problems become prominent. So how to build a secure and convenient application circumstance of e-commerce and offer enough protection to information are the hot topics which business men and consumers are both very concerned with. Security is the soul and core in the process of doing e-commerce.

The security of e-commerce includes several aspects as following:

1) Validity
Ensuring the validity of the electronic commercial information is the precondition of developing e-commerce.

2) Confidentiality
E-commerce is built on the exoteric network, so maintaining the business information secret is the important guarantee of the wide application of e-commerce.

3) Integrality
Accidents or cheating actions when inputting data can result in the differences of business information. In addition, information losing, repetition and transmission in the process of data transfer also can lead to the differences of merchant information. The information integrality of each merchant will influence the business and management strategy, and it is the basis of e-commerce applications.

4) Reliability
Under the mode of the no-paper e-commerce, it is impossible to distinguish between each merchant by signing. Therefore, in the transfer process of dealing with information reliable identification must to be offered to individual, enterprise and government who participate in the e-commerce.

5) Ability of checkup
According to the confidentiality and integrality, the result of data checkup should be noted.

The correlative technique criterions that ensure the security of e-commerce include:

- Encryption techniques
- Secret key management techniques
- Digital signature
- Security protocol of the Internet e-mail
- The main Internet security protocol
- Security of the UN/EDIFACT
- Security Electronic Trade criterion (SET).
With the wide use of the e-commerce nowadays, many security techniques have been presented and put into use. A security strategy based on fingerprint encryption technique used in e-commerce is proposed in this paper.

II. Fingerprint identification

The traditional personal identification methods cannot satisfy the security requirement of our highly interconnected information society. Biometrics based on the physiological or behavior traits identification provides a convenient and reliable scheme. Among the numerous biometrics, more attentions have been paid to the fingerprint identification technology due to its convenience, high accuracy and low cost. The technique of fingerprint identification has become one of the widest used biometric identification techniques.

Humans have used fingerprints for a very long period of time. It was not until the late 16th century that the modern scientific fingerprint technique was first initiated. In 1864, English plant morphologist, Nehemiah Grew, published the first scientific paper reporting his systematic study on the ridge, furrow, and pore structure in fingerprints. Since then, a large number of researchers have invested huge amounts of effort on fingerprint studies. In the early 20th century, fingerprint identification was formally accepted as a valid personal identification method and became a standard routine in forensics. Starting in the early 1960's, FBI, Home Office in the UK, and Paris Police Department began to invest a large amount of effort to develop automatic fingerprint identification systems. Recently, due to the rising demand in our increasing electronically inter-connected society for automatic personal identification and the success of various AFIS installations in forensics, automatic fingerprint identification technology has rapidly grown beyond forensic applications into civilian applications.

In fact, fingerprint technology is so common in personal identification that it has almost become the synonym of biometrics.

Fingerprint identification technique is widely used in many fields because of its uniqueness and invariability in the whole life of a person. A fingerprint is the pattern of ridges and valleys on the surface of a fingertip. It is formed by the accumulation of dead, cornified cells that constantly slough as scales from the exposed surface. Its formation is determined in the fetal period. It is different in pattern, break point and crossing point which is called “feature” (or minutiae) in the process of dealing with information. The fea-
ture is invariable and unique in one’s whole lifetime when it formed in person’s early life. According to the uniqueness of the feature, one fingerprint can correspond to one person, and then by comparing the acquired fingerprint feature with saved feature, one’s identity can be verified.

The pattern of the minutiae of a fingerprint forms a valid representation of the fingerprint. It is compact, amenable to matching algorithms, robust to noise and distortions, and easy to compute. However, most of the 150 types of minutiae in fingerprint images are not stable and can not be reliably identified. In an automatic fingerprint matching, only the three most prominent types of minutiae are used for their stability and robustness:

1) ridge ending
2) ridge bifurcation
3) singular points.

Where, the singular points include core and delta in fingerprint image. The core locates on the innermost ridge and is a point that has the biggest curvature in the ridge of fingerprint image, and can be used as reference point when fingerprint is matched. The delta is defined as the divergence of ridges nearest to the center. It may be a ridge dot, a short ridge, the forking point of a bifurcated ridge, ending ridge, or the point on the ridge running in front of the divergence nearest to the center between the innermost diverging ridges. The delta offers the ridge count and the beginning of tracking. The types of fingerprint minutiae are shown in Fig. 1.

(a) ridge ending   (b) ridge bifurcation

(c) singular points

○: core   Δ: delta

Fig. 1. The types of fingerprint minutiae
The AFIS is a synthetical system that integrates photoelectric technique, image process, computer and network, database technique and pattern identification technique.

There are special instrument for fingerprint image collection and various algorithms for image enhancement, minutiae extraction and minutiae matching. Fingerprint identification has been an increasingly mature technique, which can be used in bank, management, e-commerce, PC etc.

III. Fingerprint Encryption Techniques

3.1. Encryption techniques

Security is an important factor for the wide acceptance of the electronic commerce services\(^9\). So for the security problem, many techniques are presented to ensure the security of the e-commerce, such as Encryption Techniques, Firewall, Certificate Authorization, Secure Electronic Transaction, and so on\(^{10}\).

Encryption Techniques has been used for a very long time. It deals with files or data that are viewable before by a certain algorithm and let these files or data to be a passage of code called cryptograph that can’t be read, and the original text only can be displayed after inputting relevant secret key\(^{11}\). By this approach the data is protected from stealing and being read. The process of converting the coding information into the former data is called decoding. Encryption Techniques has two classes: Symmetric encryption and non-Symmetric encryption\(^{10}\). The former takes DES (Data Encryption Standard) as the typical algorithm, and the latter takes RSA (Rivest Shamir Adleman) as the typical algorithm. Symmetric encryption is widely used at present, which uses the same secret key in the process of encryption and decoding. On contrary, non-Symmetric encryption use the different secret key in encrypting and decoding, and there are two secret keys called public key that can be published and private key that can’t be published respectively.

3.2. Fingerprint Encryption Technique

To certain extent, identity authentication is more important than information encryption with the increasing application of the e-commerce. For identity authentication is the first barrier of the security of Internet and information system. Fingerprint identification has
much superiority in the field of identity authentication. So fingerprint identification can be used as a new encryption technique to ensure the security of e-commerce.

On the other hand, fingerprint feature value of 128 bit or 256 bit can be used to encrypt the information or data. This technique has already been used in e-commerce successfully\textsuperscript{[12]}.

IV. The Application

AFIS commonly includes the following steps \textsuperscript{[13]}:

- Fingerprint image collection from fingerprint sensor
- Fingerprint image evaluation
- Fingerprint image preprocess or enhancement. In order to ensure that the performance of the fingerprint identification will be robust with respect to the quality of input fingerprint images, an enhancement algorithm which will improve the clarity of the fingerprint image is necessary.
- Minutiae extraction. The ridge ending, ridge bifurcation and singular points are extracted and stored for the minutiae matching.
- Minutiae matching
- Give the result.

These steps are showed in Fig.2.

On the circumstance of Internet, consumer (client) must be authorized the identity before acquiring the access power of the relative resource if the consumer wants to visit the information that managed by long-distance server. The access power of all information must be managed by the identity authentication system, and the user that doesn’t pass the identification can not access any resource. In order to enhance the security of the system, all of the data that transfer between the client and server are encrypted, these data include fingerprint template, access desire of consumer and feedback information of server. Meanwhile, fingerprint template and relative consumer authentication, registration are saved in a local database, which only can be visit by local course in order to prevent from leaking the information of the consumer.
When implanting the template into server, fingerprint is acquired by fingerprint sensor in client, and then the fingerprint added digital sign is transferred to the main server, in which the sign is verified firstly and then identity authentication is finished after comparing the acquired fingerprint to the registered template. The whole process can be showed as Fig. 3.
V. Conclusions

Fingerprint Encryption Techniques have many virtues:

1) Identity authentication registers of fingerprint encryption technique can keep away non-authorized registers and guarantee the important information from interior.

2) Fingerprint replaces network ID, which needn’t to be memorized and worrying abort being decoded and stolen. It is secure and convenient.

With the increasingly maturation of the fingerprint identification technique, the fingerprint encryption has been widely used in the e-commerce and the security of the e-commerce can be ensured to some extent.

References

The Application of the Fingerprint Encryption Technique in E-Commerce

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A Study on Major Communication and Negotiation Models for International Business Negotiations*

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Cross cultural-national business negotiations have thus far received very little scholarly treatment in the filed of international trade. With few notable exceptions, most existing research in this field has been fragmentary and opportunistic. These problems are largely because of the lack of a broad, generalizable framework within which to conceptualize and execute research studies. This paper develops some microlevel framework to analyze some models for international trade negotiation processes and outcomes. The models are based on some basic elements and processes for face-to-face negotiations as well as written communications and are consisted of initial stages of defining the conflict, ratings and gathering information. The Lewinian paradigm of behavior determination is used as a conceptual foundation to describe and synthesize the impacts of personality. The results indicate that outcomes are most strongly determined by personality and perceptual predictors.

Key words: Negotiation, Conflict, Negotiation Model, Persuasion

I. Introduction

Conducting business across international boundaries requires interaction with people and their organizations nurtured in different cultural environments. Scholars in researching international business negotiation have been acutely aware that cultural differences across societies have to be taken into account when making marketing mix decisions. With the increasing globalization of business for most industries, cross-cultural negotiations and interactions have become a "fact of life" for many companies. With the push toward increasing economic cooperation, especially among Western European economies, the importance of understanding the cultural domain of personal selling becomes even more vital.

International business relationships are increasing in number and importance. However, little attention has been given a critical aspect of such relationships-face to face, cross-cul-
tural negotiations. Several books have recently been published regarding international business negotiations. A few articles on the topic have also appeared in the business literature. Few of these sources are based on systematic studies of the phenomenon. And the ones that are tend to use traditional methods such as surveys of experienced executives or negotiation experiments and questionnaires.

There is one element common to all types of negotiation, no matter how diverse they may be in content or procedure. Persons, in the roles of negotiators, are required to communicate positions, make demands and concessions, respond to changing signals, and arrive at outcomes. At this microlevel of analysis, negotiation can be viewed as a set of personal and interpersonal dynamics that result in outcomes of varying acceptability of the participants. From a microlevel perspective, the resolution of conflicting interests through negotiation is motivated by (1) the individual personality needs of negotiators, (2) the personality compatibility among negotiators representing opposing parties, (3) negotiator perception and expectations of the opponent—his strengths and weaknesses, his intentions and goals, and his commitments to positions; and (4) persuasive mechanisms employed to modify the bargaining positions and values of the opponent to achieve a more favorable convergence of interests.

These microlevel phenomena help to determine the nature of the bargaining process and outcome, whether it deals with labor quarrels, parent-children relations, labor-management conflicts or bilateral free trade agreement negotiations. If negotiation is defined as a process of value and behavior modification in which peaceful means are used to alter divergent positions toward a common convergence of values, microlevel analysis is especially appropriate to capture variation in the dependent variable—value change by the negotiators—as well as the impact of personal and group dynamics on affecting that change.

This article attempts to analyze the basic negotiation models negotiators can use by postulating explicitly a negotiation process model of negotiations that synthesizes the impact of personal, interpersonal and situational factors in negotiation.

II. Models of Communication Process

2.1. The Channel Capacity Paradigm

The advent of electronic communication channels, primarily two-way radio, naturally
suggested that all human communication shared the characteristics of the electronic channels. In spite of years since its development, the best known model of the communication process is the one developed in 1949 by Claude Shannon and Warren Weaver. Originally developed to explain electronic transmission of data, the Shannon and Weaver model has been pressed into general service because of its seeming simplicity and its foundation in scientific principle.

In keeping with concepts that apply to communicating by telegraph, radio and telephone, Shannon and Weaver's model depicts communication as linear, a series of steps in which a message is conveyed from a source or sender to a destination or receiver, and communication is defined as the replication of the original message at the receiver's end of the transmission. For this reason, the Shannon and Weaver model has become known as the transmission model of the communication process. Figure 1 illustrates the basic components of this process.

According to this model, if person A reads a list of randomly selected nonsense words to person B, and person B is able to repeat those words, communication has taken place. And to a certain extent that is true: B would indeed have received data from A. As Cherry and others have pointed out, the transmission model focuses on the most basic aspect of the communication process: the syntactic aspect. If the syntax (simply the order of words or other data) remains the same from the sender to the receiver, communication has taken place regardless of how different the ideas may be in the minds of the communication.
Other researchers indirectly questioned the validity of the transmission model by postulating variations to account for specific applications. Herbert (1977), for example, added the concepts of opinion change and relationship change to the transmission model to indicate more precisely the goal orientation of administrative communication. Michman and Harris (1977) included a marketing channel in their model to incorporate the influences of the external model of the communication process to argue for the centrality of the psychological system as the locus of meaning and thus the most important variable in the communication process.

2.2. The Communication Reaction Paradigm

In spite of the seeming deficiencies of the mathematical model, it has remained the most enduring conception of the communication process. Alternative paradigms have generally been more complex and more difficult to understand. In the Carnap/Bar-Hillel model, the information content of statements is based on the selective power they exert on ensembles of internal states. In other words, the recipient attributes value to a sender's statements according to the influence the information has on the decision making process and the degree to which his or her state(s) is (are) altered. In typical circumstances, a series of nonsense words would contain little or no information because the receiver would be unable to assign value to the words, and his or her internal states would remain unaffected. Osgood—best known for his work with the semantic differential—postulated that meaning is contained in the social context as well as in the message and that communication units contain both nonverbal and verbal components. Schramm (1954) developed this idea further by adding encoding and decoding to the transmission of a message and including the concept of a shared field of experience as Figure 2 illustrates.

![Figure 2. The Schramm Communication Model](image-url)
2.3. The Contextual Net Paradigm

In recent years, basic communication models have been modified in an attempt to describe the kinds of distortion that enter human communication in ways not accounted for in either syntactic or semantic models. The literature is extensive, but in general, communication models greatly oversimplify the complexity of human communication. Those based on the earlier transmission model continue to be subject to the errors Pauly deplored, and those rooted in semantics are forced to depend on individual interpretations of the abstract concepts of meaning and value. While one of the functions of a model is to present a complex process in a simplified way to facilitate understanding, the models of the communication process most widely used today simplify at the expense of accuracy. In an effort to overcome this problem, Figgins (1984) emphasized the way in which communication, as a dynamic process, changes the sender and the receiver, so that with each new message, sender and receiver become new. Although Figgins does not say so explicitly, his model correctly indicates that no communication has occurred unless change occurs in the sender and receiver.

![Figure 3. The Figgins Interpersonal Communication System Model](image)

2.4. The Consequences of Communication and Communication Model

Communication is clearly a complex process, and each of the models discussed thus
far makes an important contribution to our understanding of that process, especially in the context of business communication-pragmatic communication-with which we are primarily concerned. Even so, the models create as many questions as they answer. If we are to understand the communication process, we must have further explication of the semantic net (or semantic reaction) and the frame of reference than current models. Given that the broad categories of mathematical and semantic models actually depict the aspects of communication they are designed to elucidate, they still provide an incomplete picture of the process of human communication.

According to the semantic models, communication also depends on the meaning or value assigned to the symbols (words) used. Depending on the value assigned the various terms, our communicators would ascribe interpretive, logical and psychological meanings to the exchange, which would influence their decision making processes and future communication-when the man and women correctly perceive the meaning each attaches as (1) whether the man hopes to establish a continuing relationship, (2) whether the woman really does have other plans, (3) whether the purpose of the dinner is business or pleasure (or both) would need to be answered in similar fashion by the man and woman for communication to occur in a semantic context. We will refer to this level as the logical- psychological meaning.

2.5. A Black Box Model of Communications

Other levels of meaning are present but not fully accounted for by current models. Campbell and Level assign these levels to the black boxes with the generic label, Symbolic Interpretation but deliberately avoid examining the possible contents of each box.

Communication is an ongoing contextualized process of interaction in which meaning
emerges from the relationship of the individual interaction and the system if articulation. In the model that follows the requirement of shared meaning has been relaxed to allow for the possibility of inadvertent or unpurposeful transmissions of meanings. It has been held that people are not capable of not communicating; all behavior transmits some meaning to those aware of the behavior. The possibility also exists for any message to have a meaning to the receiver which is different from the meaning intended by the sender.

A model of this process is presented in Figure 5. The components of the model are discussed below. The paragraphs are numbered in consonance with the numbers that appear in the model. Pathways of information going to sender are identified by uppercase letters: e.g. “A”

1. The sender first determines how he or she wants the receiver to behave. The desired behavior may be of any type, ranging from an observable activity to being aware of something.

2. Based on the desired behavior and on the sender's perception (represented by A) of the receiver's past or present behavior(s), the sender determines what information must be provided to the receiver in order to effect the desired behavior.

3. Here the concept of symbolic interactionism is integrated into the model.
   The encoding process is based in part upon the sender's perception of the receiver's system of symbolic interpretation and in part upon the sender's perception of the receiver's value system (“B”)

4. After encoding, the message is transmitted.

5. The message as transmitted does not reach the receiver. While in the message channel, the message is disguised or distorted by noise. As used here, noise is external to all channel participants. This particular use of the word “noise” is not consistent with its usage in most prior models, many of which use the term semantic noise as a term to describe incorrect or inappropriate symbol selection or decoding (Wofford, Gerloff and Cummins, 1997). Noise refers to data that is devoid of information relative to the message. Such data is exogenous to the sender and receiver and interferes with the message's passage or intended perception. It should be understood that the noise depicted on the model's various pathways is not necessarily the same noise. Noise is peculiar to each pathways.

6. The message received is the same as the message transformed into a perceived message except that it has been weakened or disguised by noise.

7. The received message is transformed into a perceived message by the receiver's us-
ing his or her own system of symbolic interpretation. The perceived message is a result of the receiver's attempting to make sense out of what has been received.

8. The perceived message is now evaluated in terms of the receiver's value system. The message contains information even if the perceived information is not the information intended by the sender.

9. The receiver decides what action is appropriate in light of the current perceived message as interpreted by the current symbolic interpretation and value systems. The receiver then attempts to perform what he or she idiosyncratically considers to be the appropriate action.

10. The receiver may be hindered or helped in the performance of the desired action by objective factors.

11. However, the receiver does behave in some manner. The behavior may be observable or hidden; it may be the act of deciding not to put any weight on the message received. The final behavior may be the absence of any observable, emotional or cognitive activity.

12. The sendee becomes aware of the receiver's behavior(“D”) and interprets it. The behavior is interpreted based on the sender's own system of symbolic interpretation of the receiver's action. The sender's original interpretive system may be affected by the receiver's perceived behavior(“E”), and the sender may now desire some other behavior on the part of the receiver(“F”).

13. All of this has not been happening in an informational vacuum. Other senders want the receiver to behave in certain ways; they are also sending messages. Their messages are also perceived and may impact on the receiver's value system.

The sender becomes aware of the competitive messages and interprets them through pathway G. This interpretation, meshed with the sender's interpretation of the receiver's behavior, may affect the sender's basic symbolic interpretation system.
III. Negotiation Models

There is one element common to all types of negotiation, no matter how diverse they may be in content or procedure. Person, in the roles of negotiators, are required to communicate positions, makes demands and concessions, respond to changing signals and arrive at outcomes. At this microlevel of analysis, negotiation can be viewed as a set of personal and interpersonal dynamics that result in outcomes of varying acceptability to the participants.

3.1. A Dyadic Negotiation Model

The foundation of the negotiation model is Lewin's deceptively simple paradigm,
B=f(P, E), where B=behavior, P=person, and E=environment. Levin's paradigm and Terhune's extension to include interpersonal transaction, can be employed to interpret the complex dynamics of dyadic negotiation process and outcome. Negotiators come to the bargaining table with certain personal predispositions toward their own goals, how to achieve them with what strength of commitment; toward their bargaining counterparts, how tough their responses should be; and toward the concepts of equity and justice in negotiation. These predispositions are reflected in the negotiator's personality needs and motives. The psychological environment and ambience of the negotiation process are represented by the negotiator's perceptions and expectations of his opponent's positions, goals, intentions, commitments, strategies and actions.

Personality and environment interact within each negotiator's life space to yield manifest bargaining strategies and tactics that are intended to drive the situation toward goal achievement. Persuasion, in the form of power attempts can be employed to change the opposing negotiator's valences toward certain goals by making them more compatible with one's own valence patterns. The interdependence of opposing negotiators in a dyadic context is reflected in the outcome they can achieve jointly by their efforts at mutual persuasion. As valences toward goals become more compatible, conflicts of interest decrease, and a convergence of positions becomes possible. However, if valences toward goals are not modified sufficiently, deadlock is likely negotiation outcome. Figure 6 depicts the structure of the dyadic negotiation model.

Negotiators may come to the bargaining table with minimal role obligations, empowered to strike the best compromise possible, or with formal role functions as delegates of a group, committed to certain positions and bound by rigid instructions. The greater the degree of role obligation demanded of negotiators, the greater are the constraints on concession-making and the greater the probability of deadlocked outcomes (Druckman, 1973). Extensive role requirements may even tend to mask personality and bargaining style characteristics.

3.1.1. Background Phase

In the background phase, the personality mix of bargaining adversaries can be observed. Dyadic bargaining enables each negotiators to serve as a catalyst, facilitator, or impediment to the other. Complementary personalities are likely to communicate with each other in a cooperative and nondefensive way. Highly dissimilar personalities, on the other
hand, may be more rigid and defensive in their dealings, with a higher probability of reaching deadlocked outcomes.

3.1.2. Process Phase

The process phase contains the most complex relationships. Perceptions and expectations are shaped not only by the manifest positions and actions taken by the opponent, but also by the personality structure of the negotiator. Behavioral attempts to persuade the other side usually entail efforts to alter the other's values toward his own goals. The effective use of power and persuasion should goal patterns.

Personality also shapes one's perspective and expectations of particular objects and goals. On the other hand, a bargainer in a similar situation who has a high need for achievement might view a threatening signal as an obstacle to be overcome and approach it in the spirit of lively competition. Another element in the process phase is the behavior factor. Behavior-including demands, offers, concessions and attempts to persuade—is influenced by personality, perceptions, expectations and the behavior of the other negotiator. Lewin's behavior determination paradigm is most prevalent at this point in the model.

In the negotiation process, the mutual use of power to maximize one's own interests while achieving a common convergence of interests creates a complex mixed-motive ambience of trust and suspicion. Such an environment is generally charged with high emotional content and tension, sufficient to arouse prominent motives in a negotiator's
personality. The objective and subjective environment also impacts on the negotiator directly. A negotiator's subjective interpretation and expectation of the opponent's position and behavior provides the basis for strategic planning, whether the image is true or biased. The objective consequences of an opponent's actions can also impact major physical or psychological constraints and opportunities on one's actions.

Experienced and attentive negotiators can benefit from an implicit information-feedback loop in the bargaining situation. Interactive behavioral signalling transmits not only explicit power communications, but also tacit information about the motives of the negotiators. The more information negotiators can bring to bear on the past behavioral responses of their opponents, even if under different circumstances, the more reliable these personality influences will be.

3.1.3. Outcome Phase

Negotiation outcomes are conceived as a culmination of power plays between the participants. They are normally not the result of a single effort. Convergence of interests is a gradual process because persuasion is a gradual process. Mutual attempts to use power to influence the other side's positions and goals is not only a means of self-interest maximization. It is also a fundamental search process to identify likely areas for accommodation, sensitive issues best to be delayed, limits of acceptability, strengths of commitments and optimal timing to ensure the stability of the bargaining parties and the agreement. Acceptable formulae and agreements in principle that maximize joint payoff can be achieved through this search process, which often begins in an informal sense prior to the onset of formal negotiations.

Positive convergence is not always assured. Power may not be employed effectively or credibly by either party to persuade a sufficient change in positions. Then again, the distance between rival positions, commitment strength, time constraints and enduring suspicious between negotiation participants may be so great as to irreparably eliminate the possibilities for convergence.

3.2. The Conflict Resolution Model

This model describes a model of conflict resolution based on six experimental workshops (Levi and Benjamin, 1975a, 1975b, forthcoming; Benjamin and Levi, 1975a, 1975b, 1975c), illustrated by primarily with examples from workshop. I wish to demonstrate the
need for optimal balance between focus and flexibility in the area of conflict resolution. Focus is the function of exclusion and constancy, flexibility that of variety and variability. A central human paradox, which reflects itself in all applied behavioral science practice is the simultaneous requirement for these contrasting functions.

Conflict resolution involves more than handling process issues. The conflict must be resolved. Joe wants A to happen, Bill wants B. Unless Joe and Bill solve this problem, the conflict will remain and will perpetuate process issues (mistrust, antagonism and so on). While confronting these may in some cases alleviate the conflict and even solve it, I maintain that the exclusive focus on process is one-sided and does not tackle the conflict directly. Dealing solely with process treats symptoms, not the disease itself. Not enough attention has been assumed that men of good will can relatively easily solve conflicts which exist between them and that our job is to aid them in becoming men of good will.

### 3.2.1. Defining the Conflict

Conflict often tend initially to be ambiguous. The prime task of defining the conflict is, therefore, focus; to determine precisely what is at conflict. This is accomplished by having the opposing camps define two solutions, each of which is preferred by one side and opposed by the other. This focus on the conflict also serve a process function by clarifying the degree to which the parties are not in conflict with one another, thus reducing the tension between them. To accomplish this, each participant writes down privately his most desired goal which he suspected the other side opposed.

### 3.2.2. Rating the Conflict

The ratings also introduce an important concept; total satisfaction. All the ratings for each solution are added up, providing an index of total satisfaction for that particular solution. When conflict in the group is high this index will be low, since the high negative scores cancel out the high positive ones. The aim of the model is not merely to reduce conflict, but to increase total satisfaction with some solution.

### 3.2.3. Gathering Information-Deciding among Options

The group's task is to focus on the most important reasons for preferring one solution over another. By focusing on the crucial elements of the conflict, gathering information stage helps the participants solve the problem. Too many factors confuse rather than
clarify. The primary emphasis has been on focus; to define the essential elements of the conflict. The emphasis now shifts to flexibility, enabling the participants, on the basis of the previous focus, to choose their next step. On the other hand, these solutions are conflicting, and, therefore, creating new solutions may be called for. This information gathered may have resulted in changed attitudes, and ratings may be needed to determine whether conflict in fact still exists. Gathering more information may be required before a sensible choice about the other options can be made.

3.2.4. Creating New Solutions

It is most likely that somewhat in the process of conflict resolution new solutions will be created, even if these are minor revisions of one of the initial positions. In contrast to gathering more information, which serves mainly a focusing function, creating new solutions serves primarily a flexibility function of producing new ideas for consideration. Thus, while the former lends itself to step by step approaches a kin to De Bono’s (1970) vertical thinking, the latter requires the flexible skill which he terms lateral thinking.

![Conflict Resolution Model](image)

Figure 7. The Conflict Resolution Model

3.3. A Problem Solving Model

The basic difference between general problem-solving and conflict resolution is that with the former the problem tends to be of an external, objective nature (e.g., building a
bridge), while with the latter the issue is internal and subjective. The solution to the conflict must be found, to a large extent within the context of their personal view of the situation.

In the more objective problem-solving situation, gathering of information leads logically to creating solution and evaluation. However, we have seen how any of five alternative options are open when resolving conflict. Participants cannot be certain at the outset that they have definitely focused on the appropriate conflict. On the one hand, information gathered from the other side may change the focus as when more basic conflicts are discovered. On the other, one becomes more aware of what one really wants when one's own information is contrasted with that of the opposing side.

![Figure 8. The Problem Solving Model](image)

**IV. Conclusions**

Negotiation is one of a limited number of decision-making modes whose characteristics, taken as assumptions, are not compatible with most of the theoretical work on negotiation to date. The concession convergence approach has problems of symmetry, determinism and power, but above all fails to reflect the nature of negotiation as practiced. Negotiators begin by grouping for a jointly agreeable formula that will serve as a referent,
provide a notion of justice, and define a common perception on which implementing details can be based. Power makes the values fit together in the package and timing is important to making the formula stick.

Conducting international business across international boundaries requires interaction with people and their organizations nurtured in different cultural environments. Scholars in business negotiations have been acutely aware that cultural differences across societies have to be taken into account when making marketing mix decisions. This paper presented some communication models and negotiation models for international business negotiations.

Very closely the two major influences on the conceptions of the communication process have been the mathematical construct of Shannon and Weaver and the general semantics approach postulated by Korzybski. In many ways, the Shannon and Weaver model focuses on components external to the sender and the receiver. Korzybski, on the other hand, focuses primarily on matters within the sender and receiver but which sender and receiver have the ability to control through the correct use of language. Because the semantic reactions in the minds of sender and receiver depend more on the information each brings to the communication process than on the message communicated, even the best message properly delivered in a given situation may be misinterpreted. Others have, of course, recognized that the process of communication is itself imperfect. For those of us who would understand the process and teach it to others, however, such acceptance of communication's imperfections should not be enough.

Some empirical results tend to validate the utility of the model and an integrated psychological approach toward explaining negotiation dynamics and outcomes. The model's conceptualizations deserve further attention. Whereas the single-trait approach to a psychological explanation of negotiation has borne limited and somewhat obvious results, the dyadic negotiation model provides a structural framework that case analysts as well as experimenters can apply to examine various complex interactions. Moreover the model offers the analyst a flexible and nondeterministic tool. Each negotiation case is conceived to be a distinct and unique mixture of personality, perception, expectation and persuasion. Different negotiators.

In the conflict resolution model and the problem-Solving model, I have emphasized the focusing role of conflict definition and information gathering, versus the flexibility function of creating new solutions. Yet process considerations can decrease the relationship between the particular option and the emphasis on focus or flexibility. Each option can be pursued by methods involving varying degrees of structure. Personality variables seem to
play a role, and, therefore, participants must be given some choice between specific
techniques.

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Using XML to Create Web-based Solutions For E-Commerce

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XML-based web applications for e-commerce become more and more noticeable. The paper probes into the technological advantages of XML and Web services, discusses potential solutions and benefits brought up by XML for e-commerce. The paper also presents a prototype XML-based web site, and shows that XML significantly reduces the burden of deploying the technology needed to ensure the success of e-commerce.

Key words: XML, Web Servers, E-commerce

I. Introduction

Nowadays the number of people willing to use the Internet has a vast increase, and also a growing interest in conducting commerce over the Internet. Many people plan to use e-commerce to connect their business systems to their business partners. However connecting systems together is neither easy nor straightforward. Unless systems can communicate properly and effectively, the anticipated business benefits will not arise.

The whole rationale for e-commerce is that it lowers the operational costs for a business and improves the selling and buying opportunities. As a result profits should increase. Here lowering costs require: (1) more efficient supply chains through businesses being able to integrate their systems together so that they can interact in real time. (2) businesses participating in communities, or marketplaces of similar business, to identify new partners they can trade with.

In the global environment of the Web, platform independence and multilingual-support are basic requirements of information being delivered. A set of flexible solutions for e-commerce in both Business-to-Consumer (B2C) and Business-to-Business (B2B) environ-
ments is one of factors of success. a common and maneuverable language, flexible document formats, compatible messaging and transport protocol, and etc. are required.

So the Extensible Markup Language (XML) emerged and has became more and more noticeable, with its nature of simple and relies on popular and open standards.

II. XML-An Underlying Technology for E-commerce


The XML specification defines a standard way to add markup to documents. The word "document" refers not only to traditional documents, like this one, but also to the myriad of other XML "data formats". These include vector graphics, e-commerce transactions, mathematical equations, object meta-data, server APIs, and a thousand other kinds of structured information. The structured information contains both content and some indication of what role that content plays. XML was created so that richly structured documents could be used over the web.

XML possess advantages:
- rich data format with a structure which can be validated. The semantics can be defined to meet the requirements of a particular industry.
- open standard, which brings many free extras. Through Unicode, it has built-in support for world languages. It is cross platform, not just in the format itself, but also in terms of tools support.
- rich enough to transmit complex database information, and can convey information to keep in synch multiple databases even with very different schemata. For all that, it is easy for machines to process.
- human readable, so that if we haven't set up a system yet, we can still interact with the information on an ad-hoc basis, even if we're communicating with an automated system on the other end.

Because of its advantages, XML is a very valuable tool that helps web developers create applications. XML allows web developers to separate meta information from data/con-
tent and presentation. The meta information sits in the schema, such as a Document Type Definition (DTD), while the data/content sits in the XML itself. Web developers can then use XML very easily to produce some kind of presentation or conversion. This is very available for e-commerce. This can be illustrated by figure 1 below.

Figure 1. Different Applications Can be Generated Automatically from a Unique Source of Specifications Written in XML

Around XML technology that has broad industry acceptance standards are being built. This allows the entire web development industry to move forward. As evidence, many vertical industry standards for XML have started to emerge, including health care, financial, and data management. Horizontal industries, such as distributed computing, are also beginning to materialize. For E-commerce ebXML is coming.

Now XML is quickly becoming the e-business language by facilitating the communication of critical business data with better organization, reuse and targeting of information. XML in comparison with other potential technology choices may be less "machine efficient", but faster, cheaper to implement, and more flexible. XML offers tremendous potential to the future of E-commerce:
Improved efficiency as a result of a standardization in the representation and transfer of all information
- Transformation of data from XML to outputs in various media (Web, CD ROM, paper) without the necessity of modifying and duplicating content repeatedly
- Reuse of data at any period of time, XML being a text-based format
- Simplifications of communication as all users at any end only need to know the common XML vocabulary that is agreed upon.
- Researching, indexing and locating data will be more accurate as all information will possesses self-describing attributes
- Browsers will do most of the processing and updating of data
- Multilingual web sites as XML supports Unicode.
- Customization of information
- Accessibility to devices of any kind - desk top systems, personal digital assistants and cellular phones, without the user having to make any adjustments at his end
- Increased reliability in software
- Lesser time and cost to implement and market changes

III. XML Web Service-A Simple and Ubiquitous Web Platform for E-commerce

Web services are a new breed of Web application. They are self-contained, self-describing, modular applications that can be published, located, and invoked across the Web. Web services perform functions, which can be anything from simple requests to complicated business processes. Once a Web service is deployed, other applications (and other Web services) can discover and invoke the deployed service.

XML Web services use XML-based messaging as a fundamental means of data communication to help bridge the differences that exist between systems that use incongruent component models, operating systems, and programming languages. XML Web services enable the exchange of data and the remote invocation of application logic using XML messaging to move data through firewalls and between heterogeneous systems. Developers can create applications that weave together XML Web services from a variety of sources in much the same way that developers traditionally use components when creating a distributed application.
XML Web services possess advantages:

- Interoperability. Any Web service can interact with any other Web service. And because Web services can be written in any language, developers do not need to change their development environments in order to produce or consume web services.
- Ubiquity. Web services communicate using HTTP and XML. Therefore, any device which supports these technologies can both host and access Web services.
- Low barrier to Entry. The concepts behind Web services are easy to understand and free toolkits from vendors like IBM and Microsoft allow developers to quickly create and deploy Web services. In addition, some of these toolkits allow pre-existing COM components and JavaBeans to be easily exposed as Web services.
- Industry Support. All of the major vendors are supporting SOAP and the surrounding Web services technology.

Because of the advantages, an e-business environment has created where XML Web services are becoming the platform for business application integration. Applications of e-commerce are constructed using multiple XML Web services from various sources that work together regardless of where they reside or how they were implemented.

Some basal specifications of XML Web services are:

- XML: Short for Extensible Markup Language, a specification developed by the W3C. XML is a pared-down version of SGML, designed especially for Web documents. It allows designers to create their own customized tags, enabling the definition, transmission, validation, and interpretation of data between applications and between organizations.
- SOAP: Short for Simple Object Access Protocol, a lightweight XML-based messaging protocol used to encode the information in Web service request and response messages before sending them over a network. SOAP messages are independent of any operating system or protocol and may be transported using a variety of Internet protocols, including SMTP, MIME, and HTTP.
- WSDL: Short for Web Services Description Language, an XML-formatted language used to describe a Web service's capabilities as collections of communication endpoints capable of exchanging messages. WSDL is an integral part of UDDI, an XML-based worldwide business registry. WSDL is the language that UDDI uses.
WSDL was developed jointly by Microsoft and IBM.

- **UDDI**: Short for Universal Description, Discovery and Integration. It is a Web-based distributed directory that enables businesses to list themselves on the Internet and discover each other, similar to a traditional phone book's yellow and white pages.

XML Web services are built on XML, SOAP, WSDL and UDDI specifications. These constitute a set of baseline specifications that provide the foundation for application integration and aggregation. From these baseline specifications, companies are building real solutions and getting real value from them.

XML web services infrastructure can be illustrated by figure 2 below. XML is used to tag the data, SOAP is used to transfer the data, WSDL is used for describing the services available and UDDI is used for listing what services are available. Used primarily as a means for businesses to communicate with each other and with clients, Web services allow organizations to communicate data without intimate knowledge of each other's IT systems behind the firewall.

![Figure 2. XML Web Services Infrastructure](image)

**IV. Using XML to Create a Lightweight E-commerce Web Site**

This section is to demonstrate a simpler e-commerce Web site design by using XML.
It can meet the quite complex and dynamic requirements of a retail e-commerce web site. It is a simpler, cheaper solution for most small or medium size companies, which only have comparatively less resources to expand trying to gain a competitive advantage from internet.

The model e-commerce web site with 2-tier architecture is based on XML, so open standard technologies, essentially free for all, can be used to create efficient and effective designs. Correspondingly, one major block to true efficiency of e-commerce web sites is that smaller companies often have to outsource the hosting of their e-commerce web sites. This means they are limited as to the technologies made available to them by the hosting company, generally an Internet Service Provider (ISP). The typical architecture employed is N-tier, where data is stored in a back-end database server; the presentation is achieved by some processing logic creating the necessary HTML code and passing it to the web server, which in turns sends it to the client computer who requested it. This means that in most cases the business loses control of its data and relies on the ISP for update. This is costly and inefficient, and, what is probably worse, it effectively locks the business with that technology and thus that hosting company, re-enforcing the power of the supplier in the business relationship.

With 2-tier architecture the web site is from an XML data source. Because XML documents are essentially tree-like in structure, only data that lends itself to this kind of structure will be able to be represented by XML. Depending on its source and usage, data can be highly relational and normalised, or alternatively of a hierarchical nature. An e-commerce retailer’s range of products is nearly always arranged in a tree structure: e.g. categories, sub-categories and finally detailed product information. This kind of data lends itself well to be stored in XML.

What is more is that changes to XML structures can be done quickly and cheaply, and that the techniques used to read XML parsing means that a structural change does not automatically require changes in the programming logic of the presentation layer (this is nearly always true as long as tag names do not change). So pivotal to this design is the separation of contents and presentation made possible with XML and the innate advantages of a 2-tier architecture, with simplicity, cost, reliability, and the efficiency gains of distributed processing.

This e-commerce Web site is created to meet e-commerce requirements: present products to buyers; accept orders and payments online. There are several range of products across separate channels, and buyers are wholesalers, specialty shops and the public. Users
can log on to the site and will view different products and most importantly different prices depending on their channel status. The site structure is illustrated by figure 3 below.

Figure 3. 2-tier Architecture

The Web site’s components include server, client browser, user login, XML database and presentation layer:

- The server can run any web server software, due to the nature of the site, merely transferring text files.
- The client browser should support XML and XSLT reasonably well such as Internet Explorer 6.0 and Netscape 7.0.
- User login logic can achieve using CGI. For the security necessary around the login process, user information is contained in a secure XML document on the server. On validation of the user credentials, a client-side cookie is written for keeping track of the session. Once validation is done, the frame in the browser is redirected to another XML document specific to that user. That document is created the first time the user logs in and is afterwards updated with details of the previous orders, giving quick and direct links to those products. The products data represents fall neatly within the hierarchy of categories and subcategories. As the range grows, it can even be broken down further. The file at the top of the hierarchy (MENU) contains a list of the different product categories available on the site, with reference to the actual XML files where category information is stored.
- The XML database can be changed with products changed. The file at the top of the hierarchy contains a list of the different product categories available on the site, with reference to the actual XML files where category information is stored. A Document Type Definition (DTD) exists for the product files, this to ensure that the files are valid.
- The presentation layer can use XSLT for styling the structure and contents of the
In secure and maintenance, some of the site contents depend on the channel status of the logged user. For instance, pricing information is available via a CGI script which responds to channel and product id parameters. This was done so that pricing information will never be downloaded as a file to the client browser (if required). The site with the data in the XML database can be updated via FTP.

V. Conclusion

Using XML to create web-based solutions for e-commerce can be more beneficial than other related technologies. As is shown above, with using nothing else than XML and related technologies, a fully functional e-commerce Web site can be created, and the site’s performance can be boost by effectively distributing the processing requirements of the presentation layer. Moreover, the open-standard nature of XML and XSL adds the advantage of nil licensing cost for such a site and offers easy and total portability of the web site framework and contents.

By giving extensive application of XML to the entire domain of e-business, a big harvest will be obtained. As is presented above, with the design to describe data and to focus on what data is, XML can simplify e-business transactions on the web, and solve a key technology requirement of heterogeneous communication that appears in e-business. With the description as a standardized way of integrating web-based applications, XML-based web services can replace complex, expensive, and proprietary business integration solutions with one that is simple, affordable, and open. In the near future, with the widespread adoption of XML as a common data language, more and better web-based solutions for e-commerce will be created, and the growth of e-commerce will go up more rapidly.

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The Determinants of the Korean Banking Industry Profitability*

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This study examines the determinants of the Korean banking industry profitability for the 1992-2003 period. Very few attempts have been made at the difference in the determinants of the Korean banking industry profitability before and after 1997 Korean financial crisis. First, High profitability tend to be associated with banks that hold a relatively high amount of equity, and with large non-interest income. Second, I find that the bank performance is positively related to equity and non-interest income after 1997 financial crisis. The recent trends of financial liberalization and deregulation have created new challenges and new realities for Korean banks. What should be remembered is that the importance of equity and non-interest income in Korean banking industry is increased.

Ⅰ. Introduction

Restructuring of Korean banking system begun in 1998, and was intended to instill competition in the banking sector. Indeed, Merger and acquisitions among banks, rising competition and continuous innovation, all contribute to growing interest in a detailed evaluation of Korean banks. In fact, evaluating the performance of Korean banks is essential for managerial as well as regulatory purposes.

The recent trends of financial liberalization and deregulation have created new challenges and new realities for Korean banks. The integration of global financial markets has put Korean banks in a fierce competition with banks.

Previous attempts to study Korean banks(Park 2001, Lee, Lee, and Chung 2004) focused primarily on the Korean banks’ marketability after IMF supervision system and fo-

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cused primarily on the effects of Bancassurance of Korean financial institutions.

The purpose of this paper is to reveal the effects of integration when banks combine in terms of the cost, revenue, and profit efficiency, and to examine the determinants of the Korean banking industry profitability. Specifically, the purpose of this study is to closely examine the relationship between profitability and the banking characteristics.

This study follows in the footsteps of Abreu and Mendes(2002), Demerguc-Kunt and Huizingha(1999), Ben Naceur and Goaied(2001), Hassan and Bashir(2003) and Naceur (2003) among others. It extends the existing literature several ways. First, using bank level data for Korea in the 1992-2003 period, I provide statistics on size and decomposition of bank’s profitability. Second, the paper uses regression analysis to find the underlying determinants of Korean banking industry performance.

This study is organized as follows: A brief review of related literatures is presented in Section 2. Section 3 identifies the data sources, defines the variables, and establishes the empirical methods used in the analysis. Section 4 presents empirical results, and Section 5 summarizes and concludes the paper.

II. Related literatures

In terms of methodology, this paper borrows from the existing empirical literature on the determinants of bank profitability. This literature, as exemplified by Berger(1995), has originated in the United States and has produced numerous studies on US data. Berger examines the relationship between the return on equity and the capital asset ratio for a sample of US banks for 1983-1992 time periods. Using the Granger causality model, he shows that the return of equity and capital asset ratio tend to be positively related. But most results presented in his study have adjusted R-square of less than 10%. Abreu and Mendes(2002) investigate the determinants of bank’s interest margins and profitability for some European countries in the last decade. They report that well capitalized banks face lower expected bankruptcy costs and this advantage translates into better profitability. Although with a negative sign in all regressions, the unemployment rate is relevant in explaining bank profitability. Demerguc-Kunt and Huizingha(1999) examines the determinants of bank interest margins and profitability using a bank level data for 80 countries in the 1988-1995 period. They report that a larger ratio of bank asset to GDP and a lower market concentration ratio lead to lower margins and profits. Foreign banks have higher margins.
The Determinants of the Korean Banking Industry Profitability

and profits than domestic banks on developing countries, while the opposite prevail in developed countries. Ben Naceur and Goaied(2001) investigate the determinants of Tunisian bank’s performances during the period 1980-1995. They indicates that the best performing banks are those who have struggled to improve labour and capital productivity, those who have maintained a high level of domestic accounts relative to their assets and finally, those who have been able to reinforce their equity. Hassan and Bashir(2003) analyzes how bank characteristics and the overall financial environment affect the performance of Islamic banks. Utilizing bank level data, they examine the performance indicators of Islamic banks’ worldwide during 1994-2001. A variety of internal and external banking characteristics were used to predict profitability and efficiency. Controlling for macroeconomic environment, financial market structure, and taxation, the results indicate that high capital and loan-to-asset ratios lead to higher profitability. The results indicate a strong positive correlation between profitability and overhead. Naceur(2003) investigates the impact of bank’s characteristics, financial structure and macroeconomic indicators on bank’s net interest margins and profitability in the Tunisian banking industry for the 1980-2000 period. First, high net interest margin and profitability tend to be associated with banks that hold a relatively high amount of capital, and with large overheads. The size has mostly negative and significant coefficients on the net interest margins. Second, he finds that the macroeconomic indicators such inflation and growth rates have no impact on bank’s interest margins and profitability. Third, he finds that concentration is less beneficial to the Tunisian commercial banks than competition. Stock market development has a positive effect on bank profitability. And he found that the disintermediation of the Tunisian financial system is favourable to the banking sector profitability.

III. Empirical Methodology

The data used in this study were extracted from the data base of Korean financial supervisory commission. The sample includes the Korean banks over the period 1992-2003. The total sample is divided by two sub-period samples, and the total sample is divided by three sub-samples according to bank types. Sample includes 8 commercial banks, 6 local banks and 14 community banks.

In order to test for relevance of the causes of bank profitability, I adopt a multiple regression framework to analyze the panel data set. The basic equation I have worked with is
ROA = f(LNTA, EQTA, LIQTA, ACL, LOAN, INT, NONI, DERI) + u

where f is a linear function. ROA is the dependent variable and is the return on asset for a particular bank in a particular year. ROA shows the profit earned per Won of assets and most importantly, reflects the management ability to utilize the bank’s financial and real investment resources to generate profits. To assess the relationship performance and internal bank characteristics, I use several bank ratios. LNTA is the natural logarithm of total assets. EQTA is the ratio of equity to total assets. LIQTA is the ratio of liquidity assets to total assets. ACL is the ratio of allowances for credit losses to total assets. LOAN is the ratio of bank loans to total assets. INT is the natural logarithm of interest income, and NONI is the natural logarithm of non-interest income. DERI is the ratio of derivatives volume to total assets.

IV. Empirical results

This section presents empirical evidence on the relationship between bank performance and the determinants of bank’s profitability. The estimation technique used is panel data methods and the White(1980) procedure is used to ensure that the coefficients are heteroskedastic.

4.1. INSERT TB 1 HERE

Table 1 report the estimated coefficients of the regressions for commercial banks, local banks and community banks before 1997 banking crisis. The table shows the estimated coefficients for LNTA, EQTA, LIQTA, ACL, LOAN, INT, NONI and DERI.

Many researchers find that little cost saving can be achieved by increasing the size of the banking firm(Berger et al. 1987) and others report significant scale economies for banks whose asset size extends well into the billion range(Shaffer 1985 and many others). I find that banks total assets(LNTA) has mostly negative coefficients on ROA. This implies negative association. This negative correlation imply that-to some extent-big size tends to be associated with less profitability in Korean banks, especially in Korean commercial banks and local banks.

As with Demirguc-Kunt(1997) and Berger(1995), I find a positive relationship between
Table 1. Determinants of Korean banks profitability before 1997 banking crisis

<table>
<thead>
<tr>
<th>Variables</th>
<th>Commercial banks</th>
<th>Local banks</th>
<th>Community banks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>-.001(-.103)</td>
<td>.010(1.017)</td>
<td>-.291(-4.071)**</td>
</tr>
<tr>
<td>LNTA</td>
<td>-.000(-.362)</td>
<td>-.000(-.257)</td>
<td>.000(.028)</td>
</tr>
<tr>
<td>EQTA</td>
<td>.001(4.198)***</td>
<td>-.000(-.324)</td>
<td>.001(2.024)*</td>
</tr>
<tr>
<td>LIQTA</td>
<td>-.002(-.216)</td>
<td>-.014(-.2029)**</td>
<td>-.003(-.622)</td>
</tr>
<tr>
<td>ACL</td>
<td>.003(.154)</td>
<td>-.038(-1.344)</td>
<td>-.017(-1.303)</td>
</tr>
<tr>
<td>LOAN</td>
<td>-.226(-.716)</td>
<td>-.136(-.286)</td>
<td>.120(1.913)*</td>
</tr>
<tr>
<td>INT</td>
<td>1.058(.723)</td>
<td>2.205(.836)</td>
<td>.003(3.209)**</td>
</tr>
<tr>
<td>NONI</td>
<td>.074(.211)</td>
<td>.747(2.046)*</td>
<td>-.007(-.722)</td>
</tr>
<tr>
<td>DERI</td>
<td>-.001(-.951)</td>
<td>-.007(-.598)</td>
<td>-.000(-.827)</td>
</tr>
</tbody>
</table>

Adjusted R-squared, S.E. of regression, N. of obs, F-statistic, Prob(F-statistic) for each bank type.

*, ** and *** indicate significance levels of 10, 5 and 1 percent respectively.

Equity/Total assets (EQTA) and ROA. Unlike the commercial banks and community banks, I find a inverse relationship between EQTA and ROA in local banks, indicating that high capital ratio reduces the return on asset of Korean local banks.

My results also show that the coefficients of the ratio of liquidity assets to total assets (LIQTA) on ROA are negative and significantly different from zero, but not in local banks. It goes not have any impact on ROA. I also find that the coefficients of the ratio of allowances for credit losses to total assets (ACL) on ROA are significantly different from zero.

I find that bank loans (LOAN) does not have any significant coefficients on ROA. But it is directly and significantly related to ROA in Korean community banks. And interest income (INT) is directly and significantly related to ROA in Korean community banks. This means that bank loans and interest income are the main sources of revenue for Korean community banks.

I also find that non-interest income is directly and significantly related to ROA in Korean local banks. And there is an inverse relationship between the ratio of derivatives volume to total assets (DERI) and ROA in Korean banks.

4.2. INSERT TB 2 HERE

Table 2 report the estimated coefficients of the regressions for commercial banks, local
Table 2. Determinants of Korean banks profitability after 1997 banking crisis

<table>
<thead>
<tr>
<th>Variables</th>
<th>Commercial banks</th>
<th>Local banks</th>
<th>Community banks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>-.021(-.103)</td>
<td>.017(1.017)</td>
<td>-1.128(-3.683)***</td>
</tr>
<tr>
<td>LNTA</td>
<td>.000(.528)</td>
<td>-.000(-.067)</td>
<td>.000(.195)</td>
</tr>
<tr>
<td>EQTA</td>
<td>.008(3.584)***</td>
<td>.002(1.924)*</td>
<td>.001(1.895)*</td>
</tr>
<tr>
<td>LIQTA</td>
<td>-.001(-.623)</td>
<td>-.006(-.869)</td>
<td>-.001(-.387)</td>
</tr>
<tr>
<td>ACL</td>
<td>-.003(-.624)</td>
<td>-.027(-1.483)</td>
<td>-.008(-.863)</td>
</tr>
<tr>
<td>LOAN</td>
<td>-.193(-.924)</td>
<td>-.157(-.726)</td>
<td>.068(1.834)*</td>
</tr>
<tr>
<td>INT</td>
<td>1.058(1.209)</td>
<td>1.927(1.482)</td>
<td>.015(2.761)***</td>
</tr>
<tr>
<td>NONI</td>
<td>.138(2.621)**</td>
<td>.614(2.132)*</td>
<td>-.001(-.526)</td>
</tr>
<tr>
<td>DERI</td>
<td>.000(.534)</td>
<td>-.005(-.721)</td>
<td>-.000(-.269)</td>
</tr>
</tbody>
</table>

| Adjusted R-squared | .167 | .118 | .074 |
| S.E. of regression | .002 | .002 | .002 |
| N. of obs | 96 | 72 | 168 |
| F-statistic | 4.138 | 1.926 | 3.221 |
| Prob(F-statistic) | 0.001 | .088 | .005 |

*, ** and *** indicate significance levels of 10, 5 and 1 percent respectively.

I find that the coefficients of EQTA on ROA are positive and statistically significant. This means that equity is more important in bank management after 1997 banking crisis. I also find that the coefficients of non-interest income (NONI) on ROA are positive and statistically significant in Korean commercial banks and local banks after 1997 banking crisis. Non-interest income is defined as the net income accruing to the bank from non-interest activities (including fees, service charges, foreign exchange, and direct investment) divided by total assets. Non-interest income is growing in importance as a source of revenue for banks. Some of the fastest growing non-interest income items include ATM surcharges, credit-card fees, and fees from the sale of mutual funds and annuities (see Kidwell, Peterson and Blackwell 2000). Goldberg and Rai (1996) used the net non-interest return as a rough proxy of bank efficiency.

V. Conclusion

The preceding empirical analysis allows me to shed some light on the relationship between bank characteristics and performance in Korean banks. Very few attempts have been made at the difference in the determinants of the Korean banking industry profitability be-
fore and after 1997 Korean financial crisis. This paper examines the determinants of the Korean banking industry profitability for the 1992-2003 periods.

First, I find a positive relationship between Equity/Total assets (EQTA) and ROA. High profitability tend to be associated with banks that hold a relatively high amount of equity.

Second, I find that bank loans (LOAN) and interest income (INT) are directly and significantly related to ROA in Korean community banks. This means that bank loans and interest income are the main sources of revenue for Korean community banks.

Third, I find that the coefficients of EQTA on ROA are positive and statistically significant. This means that equity is more important in bank management after 1997 banking crisis.

Fourth, I also find that the coefficients of non-interest income (NONI) on ROA are positive and statistically significant in Korean commercial banks and local banks after 1997 banking crisis. It was found from the results that the importance of non-interest income in Korean banking industry is increased. A further direction of this study will be to prove more evidence for this result.

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Applicability of UNIDROIT Principles to International Commercial Arbitration

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There have been efforts to find rules with the greatest common ground in international business and to stipulate international laws, and a representative result of such efforts is CISG created by the United National Commission on International Trade Law (UNCITRAL). Because CISG had a problem in harmonizing the Continental law with common law, however, the stipulation of legal rules was delayed concerning major issues over which countries' interests clash with one another. Because of the nature of CISG as hard law, resolutely, concerned parties were reluctant to apply it as ground law and the law could not be applied to individual cases because of its legal deficiencies. Thus the International Institute of the Unification of Private Law (UNIDROIT) established UNIDROIT principles, which could be applicable as international unified rules. The usefulness of the UNIDROIT Principles, which acknowledge the intervention of judges (arbitrators) to the principle of contract freedom and aim at economic rationality and the realization of legal justice, is spreading everyday. In the situation that there is no internationally unified judicature, it is necessary to promote rational dispute resolution and legal stability through arbitration by adopting the UNIDROIT Principles of lex mercatoria as a governing law of international commercial contracts. Thus, there will be increasing efforts to understand correctly and research CISG as well as the UNIDROIT Principles, which complement CISG.

In conclusion, UNIDROIT principles, along with CISG, are expected to play a great role as the applicable law of trade contracts and as standards for resolving trade disputes. Because the two are not in an exclusive relation but in a complementary relation with each other, it is necessary to make concurrent jurisprudential researches on them.

Key words: UNIDROIT, CISG, Applicable Law, Lex Mercatoria, International Commercial Arbitration, Commercial Disputes.

I. Problem Definition

Among global commercial laws, the most important one together with United Nations Convention on Contracts for the International Sale of Goods (referred to as ‘CISG’ herein-
after) is the UNIDROIT Principles of International Commercial Contracts, 2004; referred to as ‘UNIDROIT Principles’ hereinafter). Of course, there are other important parts of global commercial laws such as INCOTERMS and Uniform Customs and Practice for Documentary Credit (UCP) established by ICC but these rules are applied limitedly to specific areas.

On the other hand, CISG, which takes the form of convention, has many problems in itself because of its nature as a hard law and legal deficiencies. As deficiencies are found frequently despite the unification of private laws, it is unavoidable to utilize the general principles of law or *Lex Mercatoria*\(^1\) to correct the deficiencies.

The most remarkable characteristic of the UNIDROIT Principles is that it is not a convention like CISG and thus each country does not need to make the principles to be a domestic law through ratification. Accordingly, the UNIDROIT Principles neither take the form of a contract or international convention nor have any binding force, but are practically applicable only based on persuasive value. However, it is not known well how the UNIDROIT Principles have been applied by arbitrators in actual cases of arbitration. Thus, the present paper purposed to analyze major legal theories related to the UNIDROIT Principles and cases of application of the principles and to examine how the UNIDROIT Principles is applicable to international commercial arbitration in the future.

### II. What are the intentions to establish the UNIDROIT Principles?

Different from existing international transaction laws, the UNIDROIT Principles adopt a whole new approach.\(^2\) First, different from international conventions including CISG, they comprehend the whole of the contract law rather than limiting the subjects to specific transactions. The UNIDROIT Principles are applicable to all commercial contracts, namely, sales contracts as well as construction, investment, service and loan contracts except consumer transactions\(^3\). Accordingly, the UNIDROIT Principles contain many general provisions and most of the provisions are corresponding to the general principles of civil law, the general principles of obligations and the general principles of contracts under the


\(^{3}\) Consumer transactions were excluded because each country has a special law for protecting consumers and the principle of free contract is not applied to the transactions (Comment 2 in the Preamble of the UNIDROIT Principles).
Applicability of UNIDROIT Principles to International Commercial Arbitration

Continental law system. There is the opinion that the generality of the UNIDROIT Principles can be a limitation for the application of the principles to individual special contracts but, instead, they are highly likely to be applied as a general contract law for items not covered in the sales contract.

Second, the UNIDROIT Principles, which were drawn up by civilian specialists without legislative power at the authoritative institution UNIDROIT, did not aim at the unification of domestic laws but at restating existing international contract law. In the restatement in America, however, not only the American Bar Association restated the law but also the UNIDROIT task team adopted the gently push approach, which was used by the association for common laws. The approach is coincident with the method that ICC added the provision of container transactions to INCOTERMS. As rules with persuasive value in international commercial transactions are restated into expressed provisions, they function as the source of law. This is what the legislators of the UNIDROIT Principles intended.

Third, the determinant criterion in drafting was not how many countries adopt specific rules (common core approach) but which of rules considered are most appropriate and have persuasive value in international commercial transactions (better rule approach). Thus, the UNIDROIT Principles do not take the form of contract or international convention but are applied to practical business affairs by their persuasive value without any binding force.

Fourth, the UNIDROIT Principles are not conventions with binding force, and deal with many issues that are completely excluded from or covered insufficiently in CISG. That is, the chapter on the formation of contract includes new provisions such as contract conclusion methods, confirmation documents, cases that contracting parties agree on specific items or specific forms for the formation of contract, contracts with provisions that are intentionally undecided, malicious negotiation, obligation for confidentiality, provisions on merger, contracts according to standard conditions, provisions unexpected in standard conditions, differences between standard conditions and conditions resulting from individual negotiation and provisions on disputes over form. In particular, a chapter on the validity of contracts was added.

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Other new provisions include the rule of contra proferentem, difference in language, complementation for omitted provisions, tacit obligations, payment by check, payment by draft, payment currency, the decision of payment currency when it is not specified in the contract, carrying cost, payment appropriation, necessity for official permit, hardship, right to claim execution, escape clauses, violations partially attributed to the victim and agreement on the payment of interests and defaults. In particular, the extended version in 2004 presents the intervention of third parties and provide details on set-off (Chapter 8), assignment of rights, transfer of obligation, assignment of contracts (Chapter 9), limitation of periods (Chapter 10), etc. As a result of these efforts, the UNIDROIT Principles are regarded as the most important achievements in the area of international transaction law since the establishment of INCOTERMS.

III. What roles do the UNIDROIT Principles play?

Because the UNIDROIT Principles are not conventions, they are applicable only by their persuasive value but, according to the homepage of UNIDROIT, they are expected to play important roles at least in the following situations.

First, when domestic and foreign legislators prepare legislation in the area of general contract law or specific transaction, they can get ideas from the modern or functional solutions adopted in the UNIDROIT Principles. In that the UNIDROIT Principles are the greatest common denominators collected by prominent jurists in comparative law and present the most adequate rules for international commercial transactions, they will be useful models for domestic and foreign legislation.

Second, the UNIDROIT Principles can provide each country's court or private arbitrators with rules and standards useful in interpreting or complementing existing international rules. The preamble of the UNIDROIT Principles provides, "These principles can be used to interpret or complement internationally unified legal documents." Thus, it is unquestionable that they make up for deficiencies in CIGS. Such examples include Article 7.3.1, 7.4.9-1 and 7.1.7-4 of the UNIDROIT Principles, which materialize Article 25, 78 and 79-5 of CISG, respectively. In addition, the UNIDROIT Principles can be used as a

8) This means 'against the party putting forward,' a rule that if there is any ambiguous statement on a document it should be interpreted in a way disadvantageous to the document maker or the one who presents the document as evidence.
9) http://www.unidroit.org
10) Hong Sung-kyu, op. cit., p. 200.
means of interpreting and complementing applicable domestic laws. Surprisingly, this is not mentioned explicitly in the preamble of the principles. What is more important is that the principles can provide practical solutions to special requirements in current international commercial transactions, for which domestic laws ruling individual contracts do not suggest clear or satisfactory solutions not only in underdeveloped countries and those in transition to market economy but also in developed countries with quite sophisticated legal systems such as Austria, France, Italy, Switzerland and New York State.\textsuperscript{11} In the dispute over a sales contract between Central European companies and Eastern European ones (March 4 2004), although the French law was applicable to sales contracts, the involved parties and the arbitration tribunal agreed to invoke the UNIDROIT Principles to support solutions specified in the French law.

Third, when a contract is made between parties that have different legal systems or use different languages, the UNIDROIT Principles can be utilized as guidelines. It is not uncommon that the same concepts and contents are expressed differently in international conventions and, as a consequence, are understood and interpreted wrongly. Thus, the principles contribute to the unification of legal terms. After all, the UNIDROIT Principles function as important guidelines for international commercial contracts, preventing disputes over commercial affairs.\textsuperscript{12}

Fourth, parties involved in international transactions prefer comprehensive and fair international rules established on international level to a specific country's law applicable to contracts. In case decisions are made by an arbitrator, particularly amiable arbitrator (\textit{amiable compositours}) according to uncertain international transaction practice or international commercial practice (\textit{Lex Mercatoria}), the UNIDROIT Principles, which were born of thorough study and long-term examination, will function effectively. The preamble of the UNIDROIT Principles provided, "The UNIDROIT Principles can be applied by the involved parties' explicit choice in case the parties have agreed to apply 'the general principles of law,' 'Lex Mercatoria' or equivalent principles." Accordingly, the UNIDROIT Principles are applied as rules for regulating the nature of disputes, and involved parties are often requested to agree upon the principles with regard to their contracts or by the arbitration tribunal before starting the procedure of arbitration.

As an actual case, in the dispute over a high-price equipment contract between a

\begin{flushright}
\footnotesize
\textsuperscript{11} Michael Joachim Bonell, \textit{The UNIDROIT principles in practice: caselaw and bibliography on the principles of commercial contracts}, Transnational Publishers. Inc., 2002, Preamble II. \\
\textsuperscript{12} Choi Heung-sub, \textit{op. cit.}, pp. 103-104.
\end{flushright}
Turkey company and a joint corporation based on the Philippines (May 17 2002), the contract specified the British law and the Swiss law as provisions on the choice of law and, when the dispute broke out, the parties agreed to resolve it through ad hoc arbitration according to UNCITRAL arbitration rules. The arbitration tribunal at the Chamber of Commerce and Industry in Lausanne, Switzerland suggested to choose the UNIDROIT Principles as an applicable law for the reason that it was uncertain which substantial law was applicable to the case, and the parties accepted the suggestion. Thus, the arbitration tribunal invoked Article 1.7, 4.6, 2.1.6, 7.4.1, 7.4.2(1) and 7.4.4 of the UNIDROIT Principles, and also invoked Article 7.4.2, 7.4.7, 7.4.9(2) and 7.4.10 in the final decision on the damages to be paid by the defaulter (January 31 2003).13

Lastly, it is possible to apply the UNIDROIT Principles in case the domestic court or arbitrator cannot figure out the legal nature of cases with an applicable substitute domestic law or it is hard to apply the law. Particularly as specified in each country’s arbitration law, the principles are expected to be invoked often in arbitral awards when involved parties provide the application of the UNIDROIT Principles in their contract or when arbitrators need to fill a gap in rules applied to international commercial contracts.14

IV. How are the UNIDROIT Principles applied to international commercial arbitrations?

If it is agreed to apply CISG in an international sales contract and there is a conflict between CISG and the UNIDROIT Principles, CISG has priority over the principles because CISG is a convention. Of course, the parties can exclude a part or the whole of the convention by Article 6 of CISG and may choose corresponding provisions in the UNIDROIT Principles that they consider more suitable. However, there has been no case that excluded the whole of CISG and adopted the UNIDROIT Principles. It is because parties agree upon the exclusion of CISG mostly as they want to avoid uncertainty resulting from the application of a new convention and thus they usually choose a national law, which is regarded as secure by the parties, and do not consider following the new

Designating the applicable law with the exclusion of CISG may be effective when the UNIDROIT Principles have priority over conflicting rules in CISG according to the principle of involved parties' autonomy in Article 6 of CISG. For rules consistent between the two and those absent in the UNIDROIT Principles (e.g., sellers' responsibility for defective goods, specific performance allowed to buyers, etc.), CISG is assumed to be designated as the applicable law. As a similar issue, if the law designated as the applicable law does not have any solution for the given case, the application of the UNIDROIT Principles should be denied. In such a case, the gap should be filled up not by borrowing a complement from outside but by finding it inside the law in principle. However, the UNIDROIT Principles may be considered as one of academic alternatives for complementing deficiencies.

When observing the attitude of courts and arbitration tribunals in actual suits and arbitrations, we can clearly see that the UNIDROIT Principles are used as a means of interpreting and complementing CISG.

In two cases of arbitral awards by the International Court of Arbitration at Vienna Federal Chambers Congress, the arbitrator applied interest rates, invoking Article 7.4.9-2 of the UNIDROIT Principles to complement deficiencies in CISG. As its ground, the arbitrator mentioned that the UNIDROIT Principles are the expression of the general rule of full compensation that bases both the UNIDROIT Principles and CISG. In addition, the Grenoble Court of Appeals in France, when it decided the place of refunding money paid unjustly by the buyer under CISG, set that Article 6.1.6 of the UNIDROIT Principles is the base of Article 57-1 of CISG and it is the general expression of the principle that a monetary obligation must be carried out at the obligee's business place. Besides, there are two cases of arbitration by ICC Court of Arbitration that applied Article 7.4.9-2 of the UNIDROIT Principles in setting the interest rate for the default of monetary obligation. One applied without any just reason, and the other explained that it is considered to be one of general principles by Article 7-2 of CISG. In addition, ICC Court of Arbitration states concerning another case that if 'general principles included in CISG and the
UNIDROIT Principles’ are applied or CISG is applied, ‘the UNIDROIT Principles reflect global consensus on most of basic items of the contract law and thus it is useful to refer to the principles.’ In this way, the UNIDROIT Principles are expected to be used mainly to interpret and complement CISG in international commercial arbitration.

What is more, the UNIDROIT Principles are applied as the second best option by the parties' explicit agreement when CISG is not applicable in international sales contract, or as authoritative expression when the contract is ruled by the general principles of law or *Lex Mercatoria*. That is, the UNIDROIT Principles is a typical global commercial law and are applied to contracts, to which CISG is not applicable. According to Professor Bonell, the number of cases, to which the UNIDROIT Principles are applied as an international sales contract law due to the inapplicability of CISG, is gradually increasing.

In a case of arbitration by the International Court of Arbitration at the Russian Chamber of Commerce and Industry in 1997, the contract itself did not have an applicable law but, after the dispute broke out, the parties consented that the arbitration tribunal applied the UNIDROIT Principles for matters not specified explicitly in the contract.

In another two cases, the UNIDROIT Principles were applied because the parties did not make any explicit mention. One was ICC Arbitration No. 8502 on rice supply contract between a Vietnamese exporter and French and Dutch importers and the contract did not contain the provision on applicable law. ICC Court of Arbitration arbitrated according to commercial practice and principles generally accepted in international transactions, and decided to refer to CISG or the UNIDROIT Principles to prove practice accepted under the international transaction law. What the court of arbitration referred to were Article 76 of CISG on Compensation for Damages and Article 7.4.6 of the UNIDROIT Principles.

Another case was an arbitration made by the temporary arbitration tribunal in Buenos Aires in 1997. The case was a stock sales contract between an Argentine company and a Chilean stockholder and the contract did not have the provision on applicable law. The parties assigned the arbitration tribunal the right to act as an amiable arbitrator. Although the two parties insisted on claim right according to specific regulations in the Argentine law, the arbitration tribunal decided to apply the UNIDROIT Principles. The arbitration tribunal

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passed the judgement that the UNIDROIT Principles constitute the practice of international transactions and international contracts reflecting the settlement of disputes between different legal systems so, according to Article 28-4 of UNCITRAL Model Law on International Commercial Arbitration\(^\text{25}\), the principles have priority over domestic laws. Provisions of the UNIDROIT Principles\(^\text{26}\) applied to the case were Article 3.12 (Confirmation), 3.14 (Notice of avoidance), 4.6 (Contra proferentem rule), etc.\(^\text{26}\)

In addition, the UNIDROIT Principles are often applied to contracts between countries called state contracts although not stated explicitly by the parties. For example, the case, for which partial award was made in 1995, 1998 and 1999 by ICC Court of Arbitration, was a dispute over facility supply contracts between a British company and a governmental agency of a Middle East country. Most of the contracts did not have the provision on applicable law, some of them provided that disputes would be settled according to ‘the rules of nature justice.’ In the first arbitration of partial award that dealt with the issue of applicable law, ICC Court of Arbitration judged that, abiding by the decision of the majority, the parties exclude the application of a specific country's national law and have the intention of concluding contracts ruled by general principles obtained from international consensus. According to the ICC Court of Arbitration, relevant general principles are mostly reflected in the UNIDROIT Principles and other arbitrations of partial award dealing with practical issues are understood to express generally accepted legal principles in Article 1.7 (Good faith and fair dealing), 2.1.4 (Revocation of offer), 2.1.14 (Contract with terms deliberately left open), 2.1.18 (Modification in a particular form), 7.1.3 (Withholding performance) and 7.4.8 (Mitigation of harm) in the UNIDROIT Principles.\(^\text{27}\)

Another examples that applied the UNIDROIT Principles to a state contract are ICC Arbitral Award No. 7375 and 8261. The former was a goods supply contract between an American electronic company and a governmental agency of a Middle East country\(^\text{28}\) and the former between an Italian company and another governmental agency of a Middle East country.\(^\text{29}\) Both of the two contracts did not conflict with their applicable laws. Assuming that the parties did not have the intention of accepting the opposite party's national law, ICC Court of Arbitration decided for the former case, "The general principles and rules of

\(^{25}\) Arbitration tribunal must decide according to contract conditions, and consider commercial practice applicable to the corresponding transaction.


law applicable to obligations in international contracts including the UNIDROIT Principles must be applied as long as generally accepted principles and rules are not considered to be reflected." As to the latter case, it announced, "On the assumption that the parties do not have the intention of accepting the opposite party's national law, the dispute must be settled according to contract provisions complemented by the general principles of transaction expressed as Lex Mercatoria" and finally applied some provisions of the UNIDROIT Principles without additional explanation. In addition, ICC Arbitral Award 7365 is also important and interesting. The case was a contract on the sales of equipment for air force pilot training between an American company and the Iranian Air Force in 1977. The contract included the provision on applicable law, stating that the law of the Iranian government effective on the date of contract shall be applied. However, the two parties finally agreed that if a dispute breaks out they shall apply international laws and the general principles of commercial practice complementarily to each other. ICC Court of Arbitration announced to refer to the UNIDROIT Principles for relevant general principles and rules and decided according to the UNIDROIT Principles such as Article 5.1.1 and 5.1.2 on Express and implied obligations, 6.2.3(4) on the effects of hardship, 7.3.6 on the Restitution and 7.4.9 on Interest for failure to pay money. What is interesting in the case was that American company Cubic, the defendant, brought a suit for the withdrawal of the arbitral award to the Federal District Court of the Southern California in the U.S. Cubic maintained that because the parties mentioned 'the general principles of international laws' as rules to be applied to substantial issues of dispute, the application of the UNIDROIT Principles deviated from the scope of agreement on the submission of arbitration, so it violated Article 5-1(c) of UN Convention(New York Convention) on the Recognition and Enforcement of Foreign Arbitral Awards. Article 5-1(c) of New York Convention provides that the recognition and enforcement of arbitral awards deviating from the scope of agreement on the submission of arbitration may be rejected. However, the court explicitly declined the claim and confirmed again the implied assumption of ICC Court of Arbitration that the UNIDROIT Principles are the source of law for the general principles of international laws and practice even if the arbitrator is not explicitly authorized to do so by the parties.

In a recent case of arbitral award (March 29 2005) as well, which was between a

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Applicability of UNIDROIT Principles to International Commercial Arbitration

trade company (plaintiff) registered at Gibraltar and a national corporation X (defendant) in the Central African Republic, as the Central African Republic founded a new national corporation Y and bankrupted corporation X after transferring its assets to Y while leaving its debts, the applicant brought a suit for the payment of unpaid invoice values and damages against the Central African Republic. Quoting the plaintiff's claim, the arbitration tribunal ordered the payment of unpaid invoice values. In addition, as to the payment of interests, it ordered the payment of interests calculated by the international standard rather than domestic one according to Article 7.4.9 of the UNIDROIT Principles.32 As presented above, it is remarkable that the application of the UNIDROIT Principles in arbitration for international commercial contracts is gradually increasing.

V. Conclusions

There have been efforts to find and stipulate the greatest common denominator of international rules for international business and one of such efforts is CISG established by UNCITRAL. However, because of its nature as a hard law, CISG as an applicable law has been avoided by contractors and its legal deficiencies have made it unapplicable to individual disputes. In response to these problems, UNIDROIT established and announced the UNIDROIT Principles applicable as international unified rules. Thus, the UNIDROIT Principles plays the role of interpreting and complementing CISG and functions as a law applicable to international commercial disputes. As shown by cases of practical application so far, the principles are expected to be applied frequently to international commercial arbitration in the future.

However, in that the application of the UNIDROIT Principles requires the agreement between the involved parties and is limited to international commercial contracts and in that they have not been publicized widely among business circles and there are not many cases of practical application accumulated, it may take a long time for the principles to be applied as an objective applicable law for international commercial contracts. In the current situation without international unified private law, it is necessary to induce rational resolution of disputes and enhance legal security by choosing the UNIDROIT Principles as contemporary Lex Mercatoria in international commercial contracts rather than choosing a

specific country's domestic law mistakenly due to inferior bargaining power.

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http://www.unidroit.org
http://www.unilex.info/case
The Structural Changes and Political problems in Agricultural Product Distribution*

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I'd like to show the current structural changes of agricultural product distribution in this article. The agricultural distribution system has been in the making for about last 20 years from mid-1970s on. But during the last 10 years the distribution circumstances have changed; structure of consumption, production and distributive technology system. Many items of agricultural products are diversified and developed; processed, improved newly or functionally, environment-oriented and cold-chained commodities etc. The distribution channels of them are different from traditional products. They are liable to be distributed through not wholesale markets. In this situation new distribution leaders that can control the whole distribution channel are showing up. Most of them are large-sized retailers or food service chain enterprises related to powerful integrators, namely Jaebeol.

I will provide some suggestions for our agricultural policy. Government should prepare a plan for related distributors to compete efficiently and equitably each other, maintain peasant protectionism from other powerful distributors and devise measures to complement the confusion from decline of wholesale markets.

Key words: Distribution Structure, Differentiated Products, Peasant Protectionism, Non-Wholesale Market

Ⅰ. Introduction

A lot of people think that there are many questions to be solved in agricultural product distribution. Though consumer prices are high, producer prices are too low. That is, so to speak, a problem of high distribution margin. The reasons of this phenomenon come from the properties of agricultural products; difficulties of freshness and standardization. These technical properties give many distributors some opportunities to be made ill uses.

But I don't think only like that. The development of distribution technology or control
power against brokers can not give us the solution about these distribution problems. Therefore I'd like to raise three theses in this article:

- What are the major tendencies of agricultural product distribution these days?
- What are the structural changes of agricultural product distribution?
- What are the keynotes of recent distribution policy in agricultural products?

Reviewing these questions, I try to find the new distribution system; a channel leader among many diverse distributors and some political suggestions for efficient and equitable distribution order.

II. Circumstance Changes and Current Tendencies of Agricultural Product Distribution

2.1. Circumstance Aspects of Agricultural Product Distribution

There are a few circumstance changes that take place in the agricultural product distribution these days.

The consumptions of grain have decreased, but those of vegetables, fruits and livestock products have increased continuously. And many people have pursued high-qualitative foods in consideration of safety, convenience, wealth etc.

In the production structure of agricultural products, the average land scale of peasants in 2004 is only 1.5ha, although their management size has enlarged until now. But peasants' distributional weakness caused by their petty and dispersed properties can be overcome through their organization; jakmok-ban(a group by same item-raising peasants), APC(agricultural product processing center) etc. Lately the Union Marketing Campaign by Agricultural Cooperatives and Peasants' Cooperatives come to the kernels of agricultural distribution in producing area.

Some technical advances in agricultural production and distribution are very important. In some degree differentiated items demand these technological changes. Therefore high-qualified products, for example, pro-environmental and improved items can be produced, and the technologies of post-harvest treatment and cold-chain system can give us fresh foods through their distribution.
2.2. Recent Tendencies of Agricultural Product Distribution

The rate of processing raw-material in the entire agricultural output has increased until now. In vegetables and fruits, the rate of raw-materials were about 5% around 2000, from that time the figures have increased about 10% lately (Table II-1).

| Table II-1. Processing Rate of vegetables and fruits (1,000t) |
|-----------------|-----|-----|-----|-----|-----|-----|
|                | 1998| 1999| 2000| 2001| 2002| 2003|
| vegetables     |     |     |     |     |     |     |
| A               | -   | 10,219 | 11,282 | 11,310 | 9,796 | 10,068 |
| B               | -   | 442   | 490   | 561   | 753   | 1,242 |
| B/A(%)          | -   | 4.3   | 4.3   | 5.0   | 7.7   | 12.3 |
| fruits          |     |       |       |       |       |       |
| A               | 2,153 | 2,385 | 2,429 | 2,488 | 2,500 | 2,275 |
| B               | 108  | 128   | 130   | 152   | 265   | 219  |
| B/A(%)          | 5.0  | 5.4   | 5.4   | 6.1   | 10.7  | 9.6  |

A: production output, B: processing quantities

Now differentiation of agricultural products has been an important trend. The measures of differentiation are environment-oriented, functional and new improved plants and livestock in production course. And cold-chained, convenient foods are important in distribution course. The distributive property of differentiated items is that they do not go through the wholesale markets. Most of all differentiated items are distributed by non-wholesale market or some specialized distributors.

Traditionally most of peasants have sold their products to the gathering wholesalers in their farmlands or threshing grounds. But they sell their products through cooperatives or producing groups these days. We can read that the distribution by way of cooperatives is superior to that via gathering wholesalers 2000s (Table II-2).

| Table II-2. Ratio of sales from peasants to merchants and cooperatives(%) |
|------------------|-----|-----|-----|-----|-----|
| gathering        | 50.5| 41.8| 37.1| 27.1| 33.1|
| merchants        |     |     |     |     |     |
| cooperatives     | 30.7| 36.4| 37.7| 43.2| 43.2|

Source: aT Center(2005)
Recently a few retailers become larger and larger. Then according to this trend they come to monopolistic stores. We can read the distributive power of large-sized retailers by their market share. In Table II-3, the market share of department stores and discount stores are increasing.

**Table II-3. State of large-sized retailers(billion won, %)**

<table>
<thead>
<tr>
<th></th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
</tr>
</thead>
<tbody>
<tr>
<td>department store</td>
<td>sales</td>
<td>13,333</td>
<td>15,003</td>
<td>16,363</td>
<td>17,794</td>
</tr>
<tr>
<td></td>
<td>stores</td>
<td>97</td>
<td>99</td>
<td>104</td>
<td>84</td>
</tr>
<tr>
<td></td>
<td>CR3</td>
<td>51.6</td>
<td>59.9</td>
<td>67.0</td>
<td>73.0</td>
</tr>
<tr>
<td>discount store</td>
<td>sales</td>
<td>7,571</td>
<td>10,504</td>
<td>13,791</td>
<td>17,405</td>
</tr>
<tr>
<td></td>
<td>stores</td>
<td>115</td>
<td>162</td>
<td>190</td>
<td>240</td>
</tr>
<tr>
<td></td>
<td>CR3</td>
<td>-</td>
<td>58.0</td>
<td>72.0</td>
<td>75.0</td>
</tr>
<tr>
<td>supermarket</td>
<td>sales</td>
<td>-</td>
<td>8,083</td>
<td>8,419</td>
<td>8,839</td>
</tr>
<tr>
<td></td>
<td>stores</td>
<td>4,510</td>
<td>5,285</td>
<td>5,500</td>
<td>5,600</td>
</tr>
</tbody>
</table>

According to these tendencies the distribution channel of agricultural products becomes diverse. The distribution system being centralized wholesale market comes to change lately. In Table II-4, We can catch these related states as follows; the sales of wholesale markets are increasing absolutely, but as the number of wholesale markets are increasing, then average sales of per wholesale market are declining rapidly. Each wholesale market is being contracted gradually.

**Table II-4. Transaction trend of vegetables and fruits in public wholesale markets (1,000t)**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>4,188</td>
<td>4,646</td>
<td>4,607</td>
<td>4,867</td>
<td>5,273</td>
<td>5,549</td>
<td>5,642</td>
<td>5,491</td>
<td>5,752</td>
</tr>
<tr>
<td>B</td>
<td>14</td>
<td>17</td>
<td>18</td>
<td>21</td>
<td>23</td>
<td>29</td>
<td>30</td>
<td>30</td>
<td>32</td>
</tr>
<tr>
<td>average</td>
<td>299</td>
<td>273</td>
<td>256</td>
<td>232</td>
<td>229</td>
<td>191</td>
<td>188</td>
<td>183</td>
<td>180</td>
</tr>
</tbody>
</table>

A: transaction amount, B: no. of wholesale markets

Let me review the distribution margin. In Table II-5, we can compare the margins of wholesale with non-wholesale markets. The margin rate of non-wholesale markets are lower than that of wholesale markets by 14–20%.
In Table II-5. Comparison margin rates of wholesale market with non-wholesale market(%)

<table>
<thead>
<tr>
<th>Year</th>
<th>Margin by Distribution Channel</th>
<th>Peasant Gain Rate</th>
<th>Margin Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>prod. district</td>
<td>wholesale</td>
<td>retail</td>
</tr>
<tr>
<td>2000</td>
<td>Wholesale M</td>
<td>47.5</td>
<td>52.5</td>
</tr>
<tr>
<td></td>
<td>Direct</td>
<td>64.1</td>
<td>35.9</td>
</tr>
<tr>
<td>2001</td>
<td>Wholesale M</td>
<td>46.3</td>
<td>53.7</td>
</tr>
<tr>
<td></td>
<td>Direct</td>
<td>66.0</td>
<td>34.0</td>
</tr>
<tr>
<td>2002</td>
<td>Wholesale M</td>
<td>48.8</td>
<td>51.2</td>
</tr>
<tr>
<td></td>
<td>Direct</td>
<td>64.7</td>
<td>35.3</td>
</tr>
<tr>
<td>2003</td>
<td>Wholesale M</td>
<td>48.2</td>
<td>51.8</td>
</tr>
<tr>
<td></td>
<td>Direct</td>
<td>62.3</td>
<td>37.7</td>
</tr>
<tr>
<td>2004</td>
<td>Wholesale M</td>
<td>46.7</td>
<td>53.3</td>
</tr>
<tr>
<td></td>
<td>Direct</td>
<td>62.9</td>
<td>37.1</td>
</tr>
</tbody>
</table>

But according to time series of these two margins, though the margin of production district is gradually declining, that of retail stage is increasing. This fact means that the margin contract effects caused by non-wholesale markets are provided to retailers than producers.

### III. Structural Changes of Agricultural Product Distribution

#### 3.1. Distribution Channel of Agricultural Fresh Foods governed by Large-sized Retailers

A few large-sized retailers sell a lot of agricultural products. But the ratio of sale amount is inferior to that of manipulating volume. This fact shows that the benefits from agricultural product sales are not more important than the client-inviting in most of large-sized retailers.

In Table III-1, we can read how much large-sized retailers purchase from each distribution stage in 2003. The distributors from whom they want to purchase agricultural products are vendors, producing district, wholesale markets etc. In contrary to the past, most of large-sized retailers do not want to purchase from the wholesale markets. They
prefer vendors or producing districts to wholesale markets on the average. But they prefer wholesale markets to any other distributors in purchasing vegetables and fruits.

Table III-1. Ratio of purchase from distributors in large-sized retailers(%)

<table>
<thead>
<tr>
<th></th>
<th>Producing district</th>
<th>Wholesale market</th>
<th>Vendor</th>
<th>Cooperative Distribution Center</th>
<th>Etc.</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vegetables</td>
<td>32.9</td>
<td>40.4</td>
<td>24.2</td>
<td>1.5</td>
<td>0.9</td>
<td>100.0</td>
</tr>
<tr>
<td>Rice</td>
<td>43.6</td>
<td>-</td>
<td>55.5</td>
<td>0.9</td>
<td>-</td>
<td>100.0</td>
</tr>
<tr>
<td>Beef</td>
<td>40.7</td>
<td>19.7</td>
<td>40.7</td>
<td>7.1</td>
<td>0.7</td>
<td>100.0</td>
</tr>
<tr>
<td>Pork</td>
<td>37.1</td>
<td>2.9</td>
<td>52.1</td>
<td>7.1</td>
<td>0.7</td>
<td>100.0</td>
</tr>
<tr>
<td>Fruits</td>
<td>33.9</td>
<td>42.5</td>
<td>20.0</td>
<td>3.2</td>
<td>0.4</td>
<td>100.0</td>
</tr>
<tr>
<td>Average</td>
<td>36.9</td>
<td>17.5</td>
<td>40.7</td>
<td>4.4</td>
<td>0.6</td>
<td>100.0</td>
</tr>
</tbody>
</table>


From this point I have to suggest a question. What are the name of vendors? How different are they from any other distributors? Why do large-sized retailers want to purchase agricultural products from them?

Table III-2. Requirements from large-sized retailers to distributors in producing area(%)

<table>
<thead>
<tr>
<th></th>
<th>Freshness</th>
<th>High-Quality</th>
<th>Uniformity</th>
<th>Small package</th>
<th>Supply capacity</th>
<th>Processing</th>
<th>Confidence</th>
<th>Event supply</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>D/S</td>
<td>18.3</td>
<td>25.0</td>
<td>23.3</td>
<td>10.0</td>
<td>13.3</td>
<td>1.7</td>
<td>8.3</td>
<td>-</td>
<td>100.0</td>
</tr>
<tr>
<td>D/C</td>
<td>16.4</td>
<td>13.7</td>
<td>22.2</td>
<td>9.6</td>
<td>13.2</td>
<td>0.7</td>
<td>13.0</td>
<td>11.3</td>
<td>100.0</td>
</tr>
<tr>
<td>S/C</td>
<td>23.2</td>
<td>25.0</td>
<td>23.2</td>
<td>1.8</td>
<td>23.2</td>
<td>1.8</td>
<td>1.8</td>
<td>-</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>17.5</td>
<td>16.2</td>
<td>22.4</td>
<td>8.6</td>
<td>14.5</td>
<td>0.9</td>
<td>11.1</td>
<td>8.8</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Let me introduce next Table in advance. In Table III-2, we can catch what many large-sized retailers require from the distributors in producing districts. They prefer commodity uniformity, freshness, high quality, supply capacity, etc in order.

The large-sized retailers' requirements to distributors in producing area are the agricultural products in condition that consumers can purchase immediately. So they require a certain agent who can do with agricultural products as consumers want. It is difficult for any other suppliers to do like that. Vendors, so to speak, come out in this situation.

Vendors are a kind of wholesalers, but are different from any other wholesalers as
follows. They purchase or are consigned agricultural products from some organizations in producing area. By sorting uniformly and packaging in suitable size, they sell the commodities to the large-sized retailers omitting wholesale market stage. They can satisfy not only the large-sized retailers but also small peasant organizations. But we cannot verify the obvious states about them, because government statistics and any other investigations have not been published yet. Undoubtedly they are agents for the large-sized retailers to govern the distribution channel of fresh foods.

3.2. Distribution Channel of Agricultural Raw-materials controlled by Larger Food Service Chain Enterprises

There are three food service enterprises to consume raw-materials of foods. Firstly, traditional small cook-shops do with mainly fresh agricultural foods, diverse items and menus. These raw-materials are traditionally distributed by wholesale markets, intermediate wholesalers or retailers.

Secondly, Large-sized food service chains are family restaurants and fast-food restaurants. Foodvill, Vanigans, TGI Fridays, etc. belong to family restaurants, and McDonald, Lotteria, KFC etc. belong to fast-food restaurants. These service chains do not use so much fresh foods. In this case the distribution channel of raw-materials is generally wholesale markets → vendors → Central Kitchen.

Thirdly, catering enterprises, for instance, Samsung Everland, CJ Food System, LG Our Home, Lotte Samgang etc., are so important. The rate of fresh foods they use is so high, and handling items are so much. They prefer raw-materials related to diverse menus and suitable food prices. In this case the distribution channel of raw-materials is almost same as above secondly.

3.3. Distribution Channel of Fresh-cut Foods intervened by diverse distribution agents

Next, we have to examine the fresh-cut products. Fresh-cuts mean the agricultural products for consumers’ cooking processed a little by cutting, cleansing, boiling, roasting the fresh products. The processing in this case means something for distribution; not to be related to production. Then these fresh-cuts are not manufactured but fresh foods.

The substances of these activities are not fixed by nature. So the distributors to do
fresh-cutting are farmers, cooperatives, wholesalers, retailers, processing firms, food raw-material enterprises etc. Some cooperatives and raw-material enterprises of all these distributors are superior to other competitors.

The distribution channel of these fresh-cuts is different from the fresh products. They are distributed by a new channel like raw-materials not passing through wholesale markets. The distributed quantities of these agricultural products are not so much, but whoever governs the channel of them will grasp the channel of agricultural products on the whole.

In this sense, we should keep eyes on the catering firms, large-sized retailers and food service chains, because these distributors are apt to belong to powerful conglomerate groups (=Jaebeol).

**IV. Some Properties and Problems of Agricultural Product Distribution Policy**

Let me introduce the current agricultural policy. "The Aggregate Plan of Agriculture and Rural Communities(2004)" shows us the properties of the current agricultural distribution policy. We can catch three important properties.

Firstly, the Plan suggests a vision, a framework and a strategy of new agricultural policy. In the sense of long-run strategy, social policy is divided from agricultural policy. Market principle is for agriculture, and income and welfare policies are for rural communities and peasants.

Secondly, the Plan paradigm lies on consumers' safety and food quality. The emphasis of agricultural policy transforms the production into the whole vertical area; production, distribution and consumption.

Thirdly, the purposes of distribution policy are to enforce safety management from farm to dining table and to establish distribution system of high-qualitative foods. For these aims, government will make good use of ‘brand’, support the organizations in producing districts and establish distribution information system.

Now we should suggest some problems in this current agricultural distribution policy.

Firstly, it neglects the traditional peasant protectionism in distribution side. The property to disregard small peasants stems from the division into two parts in the current policy. If a competition is enforced anarchically for efficiency, a few large-sized retailers are liable to control the distribution channel and commit unfair transactions.

Secondly, there is an obscurity of high-qualified commodities. For instance, fresh-cuts
belong to not manufactured goods but agricultural products. We must understand the obvious fact that post-harvest treatment activities are not processing but distributing.

Thirdly, as the functions of administrative agencies related to foods are overlapped, there are some confusions. And peasant organizations are too diverse; Agricultural Cooperatives, Jakmok-ban, Peasants' Cooperatives, Agricultural Corporations, the Specialized Distribution Organization, APC, Co-marketing Organization, etc. These organization systems are necessary to be adjusted properly.

V. Conclusion

Now I'd like to come to an end by providing some political suggestions conclusively.

We have to prepare a synthetic plan for related distributors to compete efficiently and equitably each other. Most of all distribution channels should not be governed by special some distributors; a few large-sized retailers or food service chains.

And it is necessary to maintain the peasant protectionism from other powerful distributors. When a few large-sized retailers or pre-modern wholesalers are liable to control the distribution channel, lots of small peasants can be exploited. They should be suitably protected.

Lastly, government must prepare the methods to complement confusions incurred from the decline of wholesale markets. For example, if the auction system will not work well in wholesale markets, any other transaction systems should be taken into account in the changed situation.

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The Contrast Between Chinese and Korean E-business Development

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As a new operation mode of economy, e-business is the product of the global economic integration during the 21st century. The development level of e-business directly will affect the position that a country or a region stands in global economic rivalry in the future. Though China and Korea have made great achievement in e-business, there are series of problems. Only with contrast and analysis, through which the main problems and countermeasures are found, can we further improve the cooperation and development between China and Korea.

Key words: E-business, Contrast and Analysis, Main Problems, Countermeasures

I. Introduction

Electronic e-business is about doing business electronically, which is designed to provide trade, management and other relevant services over networks and through computers. It encompasses many diverse activities including advertising, consultation and negotiation, on-line ordering and payment, electronic account, delivery of service, survey and opinion exchange, trade management. Electronic e-business changes the traditional face-to-face communication pattern and is a reform of old operational methods, which enable businesses to communicate with the entire world over networks. To a developing country, use of electronic e-business is a way to gather information about products and technology globally, to introduce factors of production and to expand enterprise advantages and market, thus can help reduce the gap with developed countries. On the other hand, by promoting the use of electronic e-business, the nation can enhance its economy, raise the living standard of the people, and close the digital gaps in economic development.

Electronic e-business has grown rapidly in developed countries and there is intense
competition between developed countries in this field. China and Korea are in the center of the Northeastern Asia, which is one of the three major economic regions in the world. Therefore, to strengthen the cooperation and exchange between China and Korea in the area of electronic e-business will benefit both countries. Moreover, it can facilitate the formation of a new world economic pattern, consisting of Northeastern Asia, EU and North American free trade areas.

China and Korea each has their own features and problems in the electronic e-business development. To have a correct and objective view of the existing problems and seek solutions and to analyze the common characters through comparison will be vitally important to the economic growth of both countries, and Northeastern Asia and even the whole world.

**II. The Development Status of Chinese and Korean E-business**

<table>
<thead>
<tr>
<th>Status of development of E-business in China</th>
<th>Status of development of E-business in South Korea</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Start</strong></td>
<td></td>
</tr>
<tr>
<td><strong>2. Progress</strong></td>
<td></td>
</tr>
<tr>
<td>1. In 1997, the State Council of China founded the Electronic Information Promotion Office; and in joint with eight ministries and commissions established China Electronic Business CA Safety Accreditation System, which passed the national technical appraisal. The pilot project was extended to more cities. The framework of national electronic business set up.</td>
<td>1. A comprehensive electronic business plan was started in 1981.</td>
</tr>
<tr>
<td>2. In 1997, several large e-business projects were successively launched, including China Goods Ordering System (CGOS), China Commodity Exchange Center (CCEC) and virtual Chinese Export Commodities Fair.</td>
<td>2. Seoul National University and Electronics and Telecommunications Research Institute established SDN (system development network) in 1982.</td>
</tr>
<tr>
<td>3. The Beijing Electronic Business Project was launched in 1998. The 8848 Online Supermarket launched in</td>
<td>3. In 1991, a 56kbps quick-return line was connected to US.</td>
</tr>
<tr>
<td></td>
<td>4. In the early of 1990s, the government laid down the Laws of Promoting Trade Automation, which concerned electronic business.</td>
</tr>
<tr>
<td></td>
<td>5. The trade framework and network were set up in 1991.</td>
</tr>
<tr>
<td></td>
<td>6. Online transaction over Internet was officially started in 1996.</td>
</tr>
<tr>
<td></td>
<td>7. More than one thousand e-business websites were opened in 1999.</td>
</tr>
<tr>
<td></td>
<td>8. The Customs System was established in 2000.</td>
</tr>
</tbody>
</table>
The Contrast Between Chinese and Korean E-business Development

<table>
<thead>
<tr>
<th>Achievements</th>
<th>1999 marked China’s electronic business began to grow fast.</th>
<th>9. Electronic platform was set up in 2004.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>The network pattern is founded which consists of electronic net, mobile net, date net, image net and macromedia net.</td>
<td>1. In 2000, the total amount in Korean e-business is 57.6 trillion KRW. The e-business rate goes up to 1.58%.</td>
</tr>
<tr>
<td>2.</td>
<td>In January 2001, the project of the undersea optical cable line from China to USA was finished.</td>
<td>2. In 2001, the total amount in Korean e-business is 118.98 trillion KRW.</td>
</tr>
<tr>
<td>3.</td>
<td>The serial projects such as a Golden Bridge, Golden Card, Golden Defense, Golden Tax and Golden Trade were carried out over 1990s.</td>
<td>3. In 2002, the total amount in Korean e-business is 177.81 trillion KRW.</td>
</tr>
<tr>
<td>4.</td>
<td>Now china has 40000 commercial websites.</td>
<td>4. In 2003, the total amount in Korean e-business is 235.025 trillion KRW.</td>
</tr>
<tr>
<td>5.</td>
<td>In 2004, the volume of trade of e-business of China is 400 billion RMB, increasing by 50%.</td>
<td>5. In 2004, the total amount in Korean e-business is 314.079 trillion KRW.</td>
</tr>
<tr>
<td>6.</td>
<td>On June 30, 2005, the network users of China has reached 103 million, going up by 18.39% from the same period of last year.</td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>Many fields have applied e-business such as security corporations, financial balance organizations, civil aviation ticket sales centers and credit card delivery centers.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Developing Characters</th>
<th>1. Developing strategy has changed with further reason from flippancy to thinking deeply.</th>
<th>1. Various payment ways</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.</td>
<td>Website construction develops rapidly with further popular style.</td>
<td>2. Good match and delivery system and developed logistics.</td>
</tr>
<tr>
<td>3.</td>
<td>Attract more foreign capital importation.</td>
<td>3. Well knit laws and regulations.</td>
</tr>
<tr>
<td>4.</td>
<td>E-business has been used in more and more fields and played a bigger and bigger role.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2.</td>
<td>Market running principal. E-business must run according to the enterprises behavior and market mechanism in the needs of Chinese current situation and market.</td>
<td>2. Korea set up Korean E-business Information trade center which is in the charge of president of Korea, which has two associations, one is National E-business Association, the other is Private E-business Association.</td>
</tr>
<tr>
<td>3.</td>
<td>Security principal. For national security and benefits, adopting the advanced techniques, China has exploited Chinese characteristic e-business system.</td>
<td></td>
</tr>
</tbody>
</table>

From the above comparison, it is easy to find that e-business has developed rapidly in China and Korea and both have bright future.
III. The Main Problems and Countermeasures of Chinese and Korean E-business

Globally, the application of E-Business is facing a lot of problems. How to look at these issues in the course of economic development between China and Korea and how to make use of the good experiences and methods has been a new subject of development of the economic cooperation of the two countries.

3.1. Problems and methods

<table>
<thead>
<tr>
<th>Safety problems</th>
<th>The problems &amp; methods of Chinese e-business</th>
<th>The problems &amp; methods of Korean e-business</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1. This is the most serious problem that block the development of Chinese e-business. According to the latest report of CNNIC, 28.1% of customs thinks the safety of the e-trade can’t be properly protected.</td>
<td>skim</td>
</tr>
<tr>
<td></td>
<td>1. Give full play to the supervision of the government and strengthen the legislation. 2. Conduct propaganda and education to facilitate the establishment of safety consciousness for companies and individuals.</td>
<td>1. Develop the E-Business based on Economic Basic Law and produce supplementary regulations. 2. Establish the Credit Systems of the E-Business.</td>
</tr>
<tr>
<td>Expense &amp; Telecom System</td>
<td>1. Chinese GDP ranks in the top 10s in the world but the average income level is kind of low. And the popularization can hardly reach the half level of the developed countries. 2. Chinese telecom system which combines the administration and business operation restricts the development of the internet to certain extend and seriously impacts other ISP businesses, the price of which is expensive and less competitive. On the other hand, the internet traffic jam and dissatisfied service of the Chinese Telecom also keep many latent customs out.</td>
<td>Korea is the country in which the internet is most popularized and all the colleges and universities in Korea offer the internet service free.</td>
</tr>
<tr>
<td></td>
<td>Fasten the development of the national economy; strengthen the scientific power; emphasize the information construction and reform the telecom system.</td>
<td>In April 2001, Korean Administration constitutes the National Strategies Developing and Enlarging E-Business,</td>
</tr>
<tr>
<td>The Law</td>
<td>Chinese laws start the study of the safety</td>
<td>The environment of the E-Business is not</td>
</tr>
</tbody>
</table>
## The Contrast Between Chinese and Korean E-business Development

<table>
<thead>
<tr>
<th>System</th>
<th>Issues of the internet trade quite late and can't follow the traits of the modern market economic trades, which are frequent, active and fast.</th>
<th>Ideal enough. There still are some out-of-date laws and regulations which have restricted the popularization of the E-Business and the realization of the digital economy.</th>
<th>Strengthen the construction of the legislative system.</th>
<th>At present, E-Business Basic Law, E-Business Law of Signature and Protection Byelaw of E-Business Consumers, etc. has been issued.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitude</td>
<td>Chinese E-Business has not essentially changed the restriction of the narrow thought and macro environment. 1. Eager for quick success and instant benefit. 2. Go with the stream blindly. 3. Be filled with fantasy.</td>
<td>Strengthen propaganda and education and popularize the common sense of the E-Business to improve the E-Business consciousness of the whole nation.</td>
<td>Establish the dominated role of the government and bring into play the impetus of the society.</td>
<td>The E-Business dissension has upgraded greatly and in 2002, Korean E-Business Dissension Intercession Committee accepted as many as 854 E-Business cases, 86.9% more than 2001.</td>
</tr>
<tr>
<td>Credit and Service</td>
<td>In the course of the internet trade consumers often come across such situations as bilk activities or fake products, and so on.</td>
<td>Strengthen the protection and the legislation.</td>
<td>Institute e-business consumer protection regulations and complete credit system. Appoint a committee to settle disputes.</td>
<td>The E-Business dissension has upgraded greatly and in 2002, Korean E-Business Dissension Intercession Committee accepted as many as 854 E-Business cases, 86.9% more than 2001.</td>
</tr>
<tr>
<td>Basic facility</td>
<td>The basic facilities of e-business are the electronic management in business the electronic management in finance. Only communicating between financial net and commercial net, possibly can electronic currency circulate. Some of the basic facilities are undone. Finance itself does not carry out electronic management completely. National financial network does not exist so far.</td>
<td>Appropriate more funds and make full use of all advantages to facilitate the e-business.</td>
<td>IT basic facilities have reached the advanced national level, but the utilization of it and real development still lag behind.</td>
<td>Korea Institute For Electronic Commerce, KIEC is responsible for the research and survey of both internal and external e-business, -business popularization and technology exploitation. National strategies on e-business development and expansion, issued on April 2001, the third point of which stresses that expand the utilization and make all e-business elements perfect.</td>
</tr>
<tr>
<td>Language Problem</td>
<td>The think tank of East Asia Research Institute of Singapore has warned that language has become the barrier to the development of</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Chinese internet, meanwhile it is the key point for Chinese consumers are unwilling to use e-business. Strengthen foreign language study.

<table>
<thead>
<tr>
<th>Talented Human Resources Problem</th>
<th>China’s e-business severely lacks of talents for its rapid development. The reasons are the following: 1. Shortage of related teachers 2. Ambiguous training aims 3. Deficiency in courses’ arrangement</th>
<th>Attach importance on talents training and make sure the reasonable training aim and improve the courses’ arrangement.</th>
</tr>
</thead>
</table>

International Cooperation China’s e-business does not free itself from the narrow mind, which only develops within the domestic market instead of the international market. Tap the international market actively and realize cross-country logistics. 1. Promote the globalization of e-business. The Korean government establishes E-business Overseas Tapping Association and supports domestic e-business enterprises with help of Korean embassies and KOTRA and helps them to improve the export competition, and tap overseas market. 2. Strengthen e-business international cooperation. On one hand establish bilateral cooperation systems with Japan and China to make Korea become the e-business pivot of North-east Asia. On the other hand take part in the multilateral systems actively such as WTO, ASEM, OECD, APEC.

IV. Conclusion

As two major courtiers in Northeastern Asia, China and South Korea display regional characteristics in the electronic commerce sector, in terms of development, level and problems that arise. Understanding the characteristics will be important for the study of the economy of Northeastern Asia.

First, sharing of experience in the field of electronic commerce can promote exchange
and common development of both countries and, in turn, benefit the economic growth of Northeastern Asia.

Second, cooperation between the two countries is beneficial to the construction of a new and more reasonable world economic order and can effectively prevent hegemony in international economic development. In amidst of the diversification trend in the world, chauvinism and militarism of particular countries is on the rise, which is also the case in international business and trade. Therefore international collaboration is of great significance.

The twenty-first century is characterized by diversification. Globalization is a main trend in economic development, while electronic commerce emerges as an inevitable result of economic globalization. In the complex international background, to understand the status of development of electronic commerce in China and South Korea and to improve cooperation between the two countries will bring more opportunities for the development of either country and of Northeastern Asia.

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19. Xiaohui Yuan, Guanghui Li, “Forecast of economic cooperation between China and North-East areas is wide.”, www.tradeinfo.cn
A Study on the Payment Settlement Method of International Trade in Korea*

Won-Gil Cho
Associate Professor, Dept. International Trade, Schools of Global Business in Namseoul University

SMEs are more and more playing an extremely key role in economy of a country and the world. Particularly, in the era of the Internet and e-Trade, SMEs are easy to utilize information and communication technology to facilitate their business activities. E-Trade is now the fastest way to narrow the gap among SMEs in developing countries and in developed ones. This creates an opportunity for financial institutions seeking to offer electronic trade finance services. The trade is process to trade commodities and service among the other countries.

The export price to occur in the process above-mentioned is composed to the prime cost of goods, the profits of exporter, and the export appurtenant cost. The export appurtenant cost means the cost to be changed by the conditions of a bargain. The cost is composed to logistics expenses, settlement prices, administration cost and commission. This study is subject to only appurtenant cost to be occurred in payment for goods received in the various export appurtenant cost in order to conform study subject. Consequently, we are produced to the study compares and analyzes to occur any cost differences in trade settlement form of on-line and off-line.

I. Introduction

One of the key problems of SMEs in the emerging economies is their unfavorable sectoral mix. Most of SMEs which are active in traditional sectors and lack export capability. Lack of high-tech SMEs is certainly a major handicap for the emerging economies and an obstacle to the development of locally-based e-commerce. On the other hand, the growth of Internet gives an opportunity to create new businesses, specialized in new technologies. However, in order to realize this opportunity it is necessary to have access

* This paper was supported by research fund from Nam Seoul University for the 2005 school year.
to technology and to create an environment capable of nurturing the new businesses. SMEs are more and more playing an extremely key role in economy of a country and the world. Particularly, in the era of the Internet and e-Trade, SMEs are easy to utilize information and communication technology to facilitate their business activities. However, SMEs in developing countries are facing obstacles due to backward technology infrastructure and other barriers in their country. E-Trade is now the fastest way to narrow the gap among SMEs in developing countries and in developed ones.

This creates an opportunity for financial institutions seeking to offer electronic trade finance services.

The trade is process to trade commodities and service among the other countries. The export price to occur in the process above-mentioned is composed to the prime cost of goods, the profits of exporter, and the export appurtenant cost. "The export appurtenant cost means the cost to be changed by the conditions of a bargain. The cost is composed to logistics expenses, settlement prices, administration cost and commission. This study is subject to only appurtenant cost to be occurred in payment for goods received in the various export appurtenant cost in order to conform study subject.

Consequently, we are produced to the study compares and analyzes to occur any cost differences in trade settlement form of on-line and off-line. With this in mind, it analyzes traditional trade settlement form and appurtenant cost of the electron trade settlement method.

II. Understanding of e-Trading and Payment Environment

2.1. The Definition and Characteristics of e-trading

E-trading is more than just handling purchase transactions and funds transfers over the internet. Despite e-trading's past roots in transactions between large corporations, banks, and other financial institutions, the use of the internet as a way to bring e-trading to the individual consumer has led to a shift in viewpoint. Over the past few years, both the press and the business community have increased their focus on e-trading involving the consumer.

Thus, e-trading can offer your company both short-term and long-term benefits. Moving
business practices, such as ordering, invoicing, and consumer support, to network-based systems can also reduce the paperwork involved in business-to-business transactions. Aggressive Attitude for Utilizing the Professional Knowledge and the Strengths of Environment around Us. It is necessary to use Professional Knowledge and Environmental Factors for the success of What We going to Do. Identify What We Can Do through the Internet. Above all, We should understand on the Internet itself and its characteristics. Understanding on the Structure of e-trading by the Internet. We should find out the structure and advantage of e-trading, and how to use it.

![Diagram: Traditional Trade vs. e-Trading](image)

The Characteristics of e-trading is following that. Surmounting time and space limit. So enabling 24HRS trading activity. And shortening existing process and so promoting efficiency cutting time and expenses. The fully electronic way for the flow of payment and information

2.2. The international trade payment environment

The methods used to conduct international trade remained unchanged for several hun-
dred years. International trade is still complex, paper-based and labor-intensive. The great-
est obstacle to trade is the high cost of financing for small and medium-sized traders. The
three payment methods for international trade (letters of credit, document collection, and
open account) involve risks and costs. Table 1 summarizes the average costs of settlement
processes. The table shows that the fees associated with doing business with letters of
credit are prohibitively high for some smaller transactions.

Letters of Credit – one of the most common methods of making international pay-
ments because they reduce the risks in the transaction. According to the Boston Consulting
Group, businesses involved in international trade spend about US$420 billion each year on
administrative costs, mainly on document handling and transmissions related to trade trans-
portation 1)

Documentary Collection – banks act in a fiduciary capacity and ensure that payment
is received. However, the banks are liable only for the correct execution of the collection
instructions, but are not committed to paying the seller/exporter themselves should the
buyer/importer default on its financial obligation.

Open Account – credit extended that is not supported by a note, mortgage, or other
formal written evidence of indebtedness. This method poses a risk to the supplier because
the buyer’s integrity is essential.

Other secondary methods available include:

Credit Insurance – offered to exporters who are seeking protection against commercial
and political risks, often layered on top of an open account transaction.

Credit cards – created for businesses in the form of purchasing cards, but limited in
their ability to purchase large-dollar items.

Escrow – a method used as an intermediary device during the transfer of and pay-
ment for goods.

Checks – similar to open accounts without the immediate availability of funds pro-
vided by electronic funds transfer.

TradeCard Press Kit, p. 3.
Table 1. Average Cost of Selected Financial Settlement Processes

<table>
<thead>
<tr>
<th>Per cent of International Trade</th>
<th>Letters of Credit</th>
<th>Documentary Collection</th>
<th>Open Account With Credit Insurance</th>
<th>Open Account without Credit Insurance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>20%</td>
<td>10%</td>
<td>35%</td>
<td>35%</td>
</tr>
<tr>
<td>Characteristics</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paper-based transaction</td>
<td>Paper-based</td>
<td>Paper-based</td>
<td>Paper-based transaction based on</td>
<td>Paper-based transactions based on</td>
</tr>
<tr>
<td>Compliance based on stringent</td>
<td>transaction</td>
<td>transaction</td>
<td>trust</td>
<td>transaction</td>
</tr>
<tr>
<td>documentation requirements</td>
<td>Compliance based</td>
<td>Compliance based on</td>
<td>Compliance based on buyer’s</td>
<td>Compliance based on buyer’s</td>
</tr>
<tr>
<td></td>
<td>on</td>
<td>buyer’s acceptance</td>
<td>acceptance of goods</td>
<td>acceptance of goods</td>
</tr>
<tr>
<td></td>
<td>buyer’s acceptance</td>
<td>buyer’s acceptance</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>of goods</td>
<td>of goods</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>High amount of</td>
<td>Insurance mitigates</td>
<td></td>
<td>Unsecured extension of credit</td>
</tr>
<tr>
<td></td>
<td>risk is assumed</td>
<td>risk but coverage</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>by a bank</td>
<td>limitations may exist</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average Fees Paid by Buyer &amp;</td>
<td>$1,000 - $1,500</td>
<td>$250 - $500</td>
<td>$50 - $200 plus variable cost of</td>
<td>$50 - $200</td>
</tr>
<tr>
<td>Seller¹</td>
<td></td>
<td></td>
<td>premium</td>
<td></td>
</tr>
<tr>
<td>Payment Guarantee</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full, if documents are in</td>
<td>None</td>
<td>Full, but may have</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>compliance</td>
<td></td>
<td>coverage limitations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compliance Check</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time-consuming</td>
<td>Time-consuming</td>
<td>Simple procedures</td>
<td>Simple procedures</td>
<td></td>
</tr>
<tr>
<td>Done by bank</td>
<td>Done by buyer</td>
<td>Done by buyer</td>
<td>Done by buyer</td>
<td></td>
</tr>
</tbody>
</table>

¹ Based on an average international trade transaction for manufactured goods of US$50,000. As of August 2000

2.3. The appurtenant cost status of trade price settlement

The study compares and analyzes to occur any cost differences in trade settlement form of on-line and off-line. With this in mind, it analyzes traditional trade settlement form and appurtenant cost of the electron trade settlement method.

The trade is process to trade commodities and service among the other countries. The export price to occur in the process above-mentioned is composed to the prime cost of goods, the profits of exporter, and the export appurtenant cost. "The export appurtenant cost means the cost to be changed by the conditions of a bargain. The cost is composed to logistics expenses, settlement prices, administration cost and commission. This study is subject to only appurtenant cost to be occurred in payment for goods received in the various export appurtenant cost in order to conform study subject."
III. The Electronic Trade loan Settlement Method

3.1. Trade card system

Trade card is electron trade settlement infra among enterprises. It is the system to conclude a seller and a buyer, and to settle electronically the loan. As various trade service providers are united for the system besides the buyers and the sellers, the system is to ensure security, trust, expense, efficiency and ease to settle the existing international trade loan—that the existing method is dependent to complex documents and is needed many times and expenses.

The trade card system is the electron trade settlement method to develop WTCA. It is to automate all process of export and import—the electron transfer, trade finance, loan settlement etc. In other words, it is the method that it exchanges various process from document sending to loan settlement with electron system. Also, the system is to be covered whole trade process to apply the trust guarantee institutions. So, it diminishes the settlement danger of imports and exports loan. The next figure is the flow of trade transaction on trade card.
The settlement process of trade card exchanges import and export, and transaction proposal in the web and is to omitted a letter of credit start process. Therefore, income company receives line of credit from trading bank without opening an import L/C. Then, it passes in an export enterprise after confirm confidence from bank if it sends goods purchase paper to the trade card company. On the other hand, in the case of an export enterprise, if it transmits shipping documents to the trade card company without flowing bank, the company examines the agreement of transferring instrument as electronic instrument and later if it requests price disbursement in the income company bank of account, settlement is achieved.

But, trade card system doesn’t make central shipping documents L/C electronic, and is utilizing the Proof of Delivery that replace L/C.
3.2.1. Bolero

Bolero to make joint investment by SWIFT and TT club established in 1998 is the alternate system from trade transaction by existing paper to electronic resources. It sets the goal the computerization of import and export trade, the computerization of the shipping documents examination, automation of price settlement. This system keeps as it is usual traditional trade settlement way basically, by way that replace all documents accompanied it to electronic documents, all electron documents are exchanged system throughout CMP of Bolero system. The point transfers bill of lading that is securities by on-line document. Export trader, importer, insurance company, Zen master, import and export connection person concerned with bank registers trade connection document to this system joining on Bolero and inquires and all businesses are processed automatically without special instrument creation according as handle as electronic.

![Figure 4. Bolero settlement formality by SURF](image)

The latest bolero develops and completes SURF that is a system that can accomplish whole process of price settlement to the Internet and verify automatically shipping documents agreement availability from contract because simplify more complex electron instrument process and I am propelling present actuality transaction application. It is same figure 5 if examine settlement formality by this SURF system. First, purchaser demands subscription connect to SURF after transaction party makes a trade contract in the Internet through Bolero service. SURF demands purchaser's subscription to seller and seller consents through SURF. Then, SURF requests payment guarantees to purchaser's bank of ac-
count and seller notifies letter of guarantee drawn from bank to seller. After seller applies and receive shipping documents such as commercial invoice, B/L, C/O etc, seller submits. Bank of account which purchaser undertakes instrument through SURF and is acquisition transfers capital to seller's bank of account. Finally, if seller's bank of account receives transferred capital to seller settlement end.

3.2. The appurtenant expenses present condition by electron trade settlement method

3.2.1. The appurtenant expenses at trade card use

In the case of trade card, seller pays commission about 2 fixed costs and 1 variable cost. Fixed cost selects and pay one of Coface and CIT as price payment guarantees commission that use commission and price transfer commission of trade card and variable cost is wearing personality of insurance premium. In the case of price transfer commission, I pay fixing amount of money of $15 independently of back amount of money, settlement day etc., and other commissions pay by fixed ratio of invoice amount with table 2. Only, it is happened by addition with exchange commission and traditional trade price settlement in case of is liquidated after given period on time limit condition.

<table>
<thead>
<tr>
<th>Configuration item</th>
<th>ratio</th>
<th>note</th>
</tr>
</thead>
<tbody>
<tr>
<td>fixed cost</td>
<td></td>
<td></td>
</tr>
<tr>
<td>trade card use</td>
<td>0.3% of INV</td>
<td>According to transactions size, some control is available</td>
</tr>
<tr>
<td>commission</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Price transfer commission</td>
<td>$15</td>
<td></td>
</tr>
<tr>
<td>Variable cost</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Price payment guarantees</td>
<td>Coface 0.08% of INV</td>
<td>45 days to be basis insurance</td>
</tr>
<tr>
<td></td>
<td>CIT 0.12% of INV</td>
<td>45 days to be basis insurance</td>
</tr>
<tr>
<td>Additional expense</td>
<td>exchange commission</td>
<td>purchase amount of money<em>the chain ratio time of buying</em>the number of standard collection days per currency/360*buying time standard ratio</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Usance, the case of D/A</td>
</tr>
</tbody>
</table>

3.3.2. The appurtenant expenses that happen at bolero use

There is two methods that use bolero. There are method that share use commission per item that transmit document through bolero system and method that pay annual mem-
bership that can use all services together. Uses commission per instrument transfer item levies $1 by each instrument transfer item into expense levying at instrument transmission of purchase application form, C/I, P/L, B/L etc. but bill of lading levies $3 in is negotiation of documents of title. But, the appurtenant expenses called collection fee that do release of captive birds or animals in traditional price settlement mode should pay by addition, and by Letter of Credit method bolero in case of do this main point commission connected with Letter of Credit separatively happen. On the other hand, years in though it can use all settlement services through annual membership payment medium and small enterprises' occasion $300 ~ $1,500 require. And exchange commission with traditional trade price settlement method happens in case of terms of payment as trade card are on time limit condition.

Table 3. The appurtenant expenses calculation system of Bolero method

<table>
<thead>
<tr>
<th>the using method</th>
<th>item</th>
<th>using amount of money</th>
<th>note</th>
</tr>
</thead>
<tbody>
<tr>
<td>fixed cost</td>
<td>buying application</td>
<td>US $1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>C/I</td>
<td>US $1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>P/L</td>
<td>US $1</td>
<td></td>
</tr>
<tr>
<td>document transfer method(per a case)</td>
<td>B/L</td>
<td>US $4</td>
<td></td>
</tr>
<tr>
<td>variable expense</td>
<td>exchange commission</td>
<td>buying money<em>the chain ratio</em> time of buying<em>the number of standard collection days per currency/360</em> buying time standard ratio</td>
<td>usance of L/C, D/A</td>
</tr>
<tr>
<td>additional expense</td>
<td>collection fee</td>
<td>collection amount of money*0.1% (min: 10,000 won, max: 30,000 won)</td>
<td>the using collection method (D/S, D/P)</td>
</tr>
<tr>
<td></td>
<td>notice fee</td>
<td>20,000 won per a case</td>
<td>using the letter of credit</td>
</tr>
<tr>
<td></td>
<td>transfer fee</td>
<td>the domestic transfer: 20,000 won per a case, the overseas transfer: 30,000 won per a case</td>
<td>using the letter of credit</td>
</tr>
<tr>
<td></td>
<td>exchange fee</td>
<td>0.1% of buying price</td>
<td></td>
</tr>
</tbody>
</table>

3.3. Appurtenant cost comparison analysis of traditional trade settlement method and the electron trade settlement method.

This study premises some conditions in order to compare and analyze the appurtenant cost of the traditional trade settlement form and the electron trade settlement form. However the settlement of a letter of credit form occurs various appurtenant cost, the form
is different from settlement system among the banks. So less charge, receipt delay interest, confirm fee are judged not to be suitable at analysis object. The fee is not to be imposed by the bank to have an account with exporters. It is expense to be imposed by other bank to locate overseas and open bank, because it is difficult to be noticed the rate of interest that the cost is occurred in the foreign exchange trade. On this score, Let’s presume a case to receipt money from trade bank under like this conditions.

① the basic period : July 1st 2004
② buying amount of money : US$10,000  US$ 50,000  US$ 100,000
③ the exchange rate : 1,172won
④ the conversion rate : LIBOR interest (on money) + α
⑤ the conversion of the number of days : at sight 10days, usance 90days
⑥ appurtenant cost item:
   - the case of the letter of credit : postage, buying commission, notice fee, exchange commission, substitution fee, transfer commission,
   - the case of collection : postage, collection commission, exchange commission
   - the case of O/A : exchange commission
⑦ other expense : the traffic expense average cost to be paid per one case of export

IV. Resolution of Analysis the electron trade settlement method.

4.1. A New System Built on the Internet

The new management changed the whole medium of providing electronic settlement services by abandoning the client-server system to develop an entirely new system on the Internet. TradeCard Inc. built the new TradeCard system around the old client service system model on an Internet-based system that allowed the buyers, sellers and the network partners to access one application through a Web browser based on the HTTP and HTML protocols.

All types of business documents are stored internally in the TradeCard system as XML; although TradeCard customers are not required to have XML-compliant interfaces
on their systems. For example, a seller can upload an invoice from an automated supply chain system directly into the TradeCard system, the buyer can view the invoice in HTML via a Web browser, and a freight forwarder can send the advance shipping notice in EDI format.

TradeCard developed a standard XML-based schema that is published for every service provider to use. This standard has been available since November 1999 when TradeCard first began settling transactions across the network. In special circumstances, TradeCard provides translation services for standard industry accepted formats into its own schema. In countries where paper documents are still required, these documents could be faxed to the TradeCard system. The documents would then be stored as images accessible via a Web browser.

No other company offered the same kind of services as TradeCard. However, TradeCard is often compared with Bolero Ltd., a joint development of the Through Transport Club and the Society for Worldwide Interbank Financial Telecommunication, or SWIFT, which tested an electronic registry for global trade.

The Bolero system is like a repository for Letters of Credit. The system is used mainly for bulk shipments of commodities, such as crude oil, in which market participants could trade their positions in a cargo several times during a voyage 2)

Bolero is a neutral secure platform enabling paperless trading between buyers, sellers, and their logistics service and bank partners. Our solutions integrate the physical and financial supply chains, providing visibility, predictability, accuracy and security. This delivers improvements in operational efficiencies and reductions in working capital.

4.2. The appurtenant cost analysis of electron trade settlement method

In order to analyze appurtenant cost of trade card or Bolero, the study analyzes to buying amount of money standard as previously assumed. Trade card selects a credit guarantee agency, there is a difference to expense by the selection. When buying amount of money is US $ 10,000, the appurtenant cost to be occurred when using the trade card is from minimum 68,701 won to maximum 74,187 in the case of at sight. But on how to se-

---

lect a credit guarantee agency. The appurtenant expense becomes 68,701 won ~ 73,389 won and 69,499 won ~ 74,187 won.

Table 4. The appurtenant cost to be occurred when using the trade card

<table>
<thead>
<tr>
<th>settlement form</th>
<th>at sight</th>
<th>usance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>when the buying cost is $10,000</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>minimum</td>
<td>35,160</td>
<td>17,580</td>
</tr>
<tr>
<td>maximum</td>
<td>35,160</td>
<td>17,580</td>
</tr>
<tr>
<td><strong>when the buying cost is $50,000</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>minimum</td>
<td>175,800</td>
<td>17,580</td>
</tr>
<tr>
<td>maximum</td>
<td>175,800</td>
<td>17,580</td>
</tr>
<tr>
<td><strong>when the buying cost is $100,000</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>minimum</td>
<td>351,600</td>
<td>17,580</td>
</tr>
<tr>
<td>maximum</td>
<td>351,600</td>
<td>17,580</td>
</tr>
</tbody>
</table>

The case of Bolero is equal the additional cost to occur in the traditional trade settlement method and fixed cost per a case is cheaper than traditional trade settlement method when the document issue and notice are formed in electronic. For example, in the case of buying for $50,000, fixed cost in the traditional trade settlement method comes 47,042 won (by minimum price of at sight), however the case of Bolero is cheap about six times for 8,204 won. But exchange commissions or additional expenses in variable expense are equal to the traditional trade settlement method.
Table 5. The appurtenant cost to be occurred when using the Bolero

<table>
<thead>
<tr>
<th>Settlement Form</th>
<th>Apportionment Cost Item</th>
<th>Fixed Cost</th>
<th>Variable Cost</th>
<th>Additional Expense</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Document Issue Fee (per case)</td>
<td></td>
<td>Exchange Commission</td>
<td>Transfer Commission</td>
<td>Collection Commission</td>
</tr>
<tr>
<td>at sight</td>
<td>minimum</td>
<td>1,172</td>
<td>1,172</td>
<td>4,688</td>
<td>10,408</td>
</tr>
<tr>
<td></td>
<td>maximum</td>
<td>3,516</td>
<td>1,172</td>
<td>4,688</td>
<td>143,733</td>
</tr>
<tr>
<td>L/C</td>
<td>minimum</td>
<td>1,172</td>
<td>1,172</td>
<td>4,688</td>
<td>105,773</td>
</tr>
<tr>
<td></td>
<td>maximum</td>
<td>3,516</td>
<td>1,172</td>
<td>4,688</td>
<td>120,423</td>
</tr>
<tr>
<td>D/A</td>
<td>minimum</td>
<td>1,172</td>
<td>1,172</td>
<td>4,688</td>
<td>105,773</td>
</tr>
<tr>
<td></td>
<td>maximum</td>
<td>3,516</td>
<td>1,172</td>
<td>4,688</td>
<td>120,423</td>
</tr>
<tr>
<td>at sight</td>
<td>minimum</td>
<td>1,172</td>
<td>1,172</td>
<td>4,688</td>
<td>105,773</td>
</tr>
<tr>
<td>L/C</td>
<td>minimum</td>
<td>3,516</td>
<td>1,172</td>
<td>4,688</td>
<td>120,423</td>
</tr>
<tr>
<td></td>
<td>maximum</td>
<td>3,516</td>
<td>1,172</td>
<td>4,688</td>
<td>120,423</td>
</tr>
<tr>
<td>D/A</td>
<td>minimum</td>
<td>3,516</td>
<td>1,172</td>
<td>4,688</td>
<td>120,423</td>
</tr>
<tr>
<td></td>
<td>maximum</td>
<td>3,516</td>
<td>1,172</td>
<td>4,688</td>
<td>120,423</td>
</tr>
</tbody>
</table>

4.3. The appurtenant cost comparison in trade settlement method

When it analyzes to overview the appurtenant cost to be occurred the traditional trade settlement method and the electron trade settlement method, it is analyzed that The appurtenant cost of the electron trade settlement method is cheaper than the traditional trade settlement method for the price settlement of the buying amount of $10,000. When it uses L/C at sight payment method, the appurtenant cost to cost is from 108,128 won to 153,268 won, from 71,524 won to 77,352 won in the case of the trade card, from 45,612 won to 93,096 won in Bolero. So, the electron trade settlement method is cheaper about 1.5 ~3 times than the traditional trade settlement method. The appurtenant cost to cost in the case of the conditions which it promises is also cheap the electron trade settlement method. But it appeared with the fact that the difference is not big. However it appeared preferable with the fact that the electron trade settlement method costs more the appurtenant cost than the traditional trade settlement method in the buying price over $50,000. This research presents the optimum level of the electron trade settlement method through analyzing of the research data like this actual condition with base...
Table 6. The appurtenant cost present condition which it follows in buying amount of money and settlement method

<table>
<thead>
<tr>
<th>Settlement Method</th>
<th>Buying Method</th>
<th>USD 10,000</th>
<th>USD 50,000</th>
<th>USD 100,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional Trade Settlement</td>
<td>L/C</td>
<td>minim</td>
<td>108,128</td>
<td>192,642</td>
</tr>
<tr>
<td></td>
<td>maximum</td>
<td>153,268</td>
<td>242,340</td>
<td>353,680</td>
</tr>
<tr>
<td></td>
<td>trade card</td>
<td>minim</td>
<td>130,698.00</td>
<td>217,491.00</td>
</tr>
<tr>
<td></td>
<td>maximum</td>
<td>153,268</td>
<td>242,340</td>
<td>353,680</td>
</tr>
<tr>
<td></td>
<td>Bolero</td>
<td>minim</td>
<td>49,332</td>
<td>133,846</td>
</tr>
<tr>
<td></td>
<td>maximum</td>
<td>82,816</td>
<td>171,888</td>
<td>283,228</td>
</tr>
<tr>
<td>Usance Settlement</td>
<td>L/C</td>
<td>minim</td>
<td>204,493</td>
<td>674,465</td>
</tr>
<tr>
<td></td>
<td>maximum</td>
<td>263,143</td>
<td>791,715</td>
<td></td>
</tr>
<tr>
<td></td>
<td>D/A</td>
<td>minim</td>
<td>233,818.00</td>
<td>697,864.00</td>
</tr>
<tr>
<td></td>
<td>maximum</td>
<td>157,098.00</td>
<td>609,490.00</td>
<td>1,175,080.00</td>
</tr>
<tr>
<td></td>
<td>D/P</td>
<td>minim</td>
<td>27,000</td>
<td>27,000</td>
</tr>
<tr>
<td></td>
<td>maximum</td>
<td>44,000.00</td>
<td>44,000.00</td>
<td>44,000.00</td>
</tr>
<tr>
<td></td>
<td>trade card</td>
<td>maximun</td>
<td>187,227</td>
<td>865,815</td>
</tr>
<tr>
<td></td>
<td>Bolero</td>
<td>minim</td>
<td>177,558.00</td>
<td>817,470.00</td>
</tr>
<tr>
<td></td>
<td>maximum</td>
<td>192,691</td>
<td>721,263</td>
<td>1,381,978</td>
</tr>
</tbody>
</table>

4.4. The analysis result and the optimum level

Answered companies are currently using a simple remittance method (48.9%) most plentifully, and they are using settlement method as follows the letter of credit method (39.7%), the payment collection method (7.2%), the transfer collection method (2.2%). These companies answer unsatisfactory with respect to the occurred the appurtenant cost (44.6%), the dangerous of collection loan (19.4%), the credit of transaction method (15.1%), the negotiation process of settlement method (7.9%), when they use the price settlement method in respect of the traditional trade price settlement method.

The survey said that export traders are not satisfied with paying some of the additional charges to the bank such as exchange commission (30.9%), buying commission (16.9%), collection fee (14.7%), delay charge (14.7%) and so on. Additionally, they are not satisfied with less charge which is required from opening bank and negotiating bank after collection loans.
Table 7. The dissatisfaction item when using the traditional trade price settlement

<table>
<thead>
<tr>
<th>section</th>
<th>frequency</th>
<th>ratio(%)</th>
<th>Accumulation ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>trust of transactions method</td>
<td>21</td>
<td>15.1</td>
<td>15.1</td>
</tr>
<tr>
<td>incidental expenses</td>
<td>62</td>
<td>44.6</td>
<td>59.7</td>
</tr>
<tr>
<td>the agreement process which it follows in settlement method</td>
<td>11</td>
<td>7.9</td>
<td>67.6</td>
</tr>
<tr>
<td>settlement term of the deal</td>
<td>13</td>
<td>9.4</td>
<td>77.0</td>
</tr>
<tr>
<td>export price collection danger</td>
<td>27</td>
<td>19.4</td>
<td>96.4</td>
</tr>
<tr>
<td>etc.</td>
<td>2</td>
<td>3.6</td>
<td>100.0</td>
</tr>
<tr>
<td>the total</td>
<td>130</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Table 8. the cost to pay unreasonably when occurred the appurtenant cost

<table>
<thead>
<tr>
<th>section</th>
<th>frequency</th>
<th>ratio(%)</th>
<th>Accumulation ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>exchange commission</td>
<td>42</td>
<td>30.9</td>
<td>30.9</td>
</tr>
<tr>
<td>buying commission</td>
<td>23</td>
<td>16.9</td>
<td>47.8</td>
</tr>
<tr>
<td>collection commission</td>
<td>20</td>
<td>14.7</td>
<td>62.5</td>
</tr>
<tr>
<td>postage</td>
<td>2</td>
<td>1.5</td>
<td>64.0</td>
</tr>
<tr>
<td>notice fee</td>
<td>5</td>
<td>3.7</td>
<td>67.7</td>
</tr>
<tr>
<td>transfer fee</td>
<td>2</td>
<td>1.5</td>
<td>69.2</td>
</tr>
<tr>
<td>receive delay interest</td>
<td>20</td>
<td>14.7</td>
<td>83.9</td>
</tr>
<tr>
<td>confirm fee</td>
<td>4</td>
<td>2.9</td>
<td>86.8</td>
</tr>
<tr>
<td>etc.</td>
<td>18</td>
<td>13.2</td>
<td>100</td>
</tr>
<tr>
<td>the total</td>
<td>136</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

Also, it is said that it costs average 9000 won for a business trip and takes about 2 hours when enterprises collects loans. Only 9.4% of these enterprises are using electron trade price settlement method and rest of them are not using the method.

Response, month export number of item of enterprises 1~3 item 48.2%, 4~6 item 20.9%, 6~9 item 10.8%, 10 by 18% examine. Also, according to the survey, among their export average, 10000 to 30000 accounts for 33.1%, followed by below 22.3%, $30000~$60000 placing third with followed by more than $60000~100000

As you see the average export number of items per month and export settlement per
one export transaction, we found that enterprises of our country export 1~3 times per
month by the amount of US$30,000.

According to the survey, 33 (24.2%) of 136 enterprises have experienced in electron
trade price settlement method, 24(17.6%) of them use it 1~2 times per month, 4(2.9%) of
them use it 3~4 times per month and 4(2.9%) of them use it over 7 times a month.
Specially, these enterprises frequently use electron trade settlement systems when the pur-
chasing is less. According to research, below 10000$ is 21, and 10000$~20000 is 5,
20000$~30000 is 2, 30000$~ 40000 is 2, more than 50000 examined by 3

Therefore, it is proven that traders frequently use electron trade settlement system as
purchase amount is small.

This hypothesis may be explained by incidental expenses difference by explanation of
settlement method above.

According to break even point of purchase amount of money and incidental expenses
by settlement method that appear to <table 8>, Can know that incidental expenses of tra-
ditional trade price settlement (L/C) and electron trade settlement (Trade Card) are crossed
when purchase amount of money is below US$ 25000. Bolero's instance is changed by tilt
such as traditional price settlement mode only.

These reason are incidental expenses of Letter of Credit method and Bolero method
because variable cost and additional expense are similar nothing but there is difference of
fixed cost.

Therefore, if purchase amount of money is the smaller as can know in <figure 5>and
<figure 6>, incidental expenses of electron trade price settlement method can speak that is
small than incidental expenses of traditional trade price economy method. However, such
hypothesis turns out be to true when purchase amount is less than US$ 25,000.

These result may become data that can drive practical use of electron trade settlement
method to enterprises which is not using now electron trade price settlement.

Whole 84.9% (115) responded that will take advantage of electron trade settlement
method in case of electron trade price settlement method is more inexpensive than in-
cidental expenses of traditional price settlement method to these enterprises.

Nevertheless, response enterprises are using traditional price settlement method paying
from more expenses to commission incidental expenses that is produced in electron trade
settlement mode because is using more traditional price settlement method.
Figure 5. the appurtenant cost status in the case of At sight

Figure 6. the appurtenant cost status in the case of Usance

These result is because government or connection institution had a little public information about electron trade.

Also, I can speak as absence of study for charge side that industry is interested in account of economic effect of electron trade. Also, there is part that electron trade settlement system use does not solve to be activated.
Enterprises which take part in question spoke by international certification business unpreparedness, trust tribe of system, concern interested's participation tribe, unpreparedness of electronic documents, excess of settlement incidental expenses for reason which is not using electron trade settlement system.

Table 9. the point issue of electron trade loan settlement method

<table>
<thead>
<tr>
<th>section</th>
<th>frequency</th>
<th>ratio(%)</th>
<th>Accumulation ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>excess of settlement appurtenant cost</td>
<td>12</td>
<td>8.8</td>
<td>8.8</td>
</tr>
<tr>
<td>standard inadequacy of eletronic document</td>
<td>24</td>
<td>17.6</td>
<td>26.4</td>
</tr>
<tr>
<td>inadequacy of legal agency</td>
<td>7</td>
<td>5.1</td>
<td>31.5</td>
</tr>
<tr>
<td>participation lack of institution</td>
<td>26</td>
<td>19.1</td>
<td>50.6</td>
</tr>
<tr>
<td>trust lack of system</td>
<td>30</td>
<td>22.1</td>
<td>77.7</td>
</tr>
<tr>
<td>inadequacy of international mutual authentication</td>
<td>36</td>
<td>26.5</td>
<td>99.2</td>
</tr>
<tr>
<td>no answer</td>
<td>1</td>
<td>0.8</td>
<td>100</td>
</tr>
<tr>
<td>the total</td>
<td>136</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

Many or not of settlement incidental expenses are not the decision cause of using the electron trade settlement system, but it is clear that enterprises have a many interest about expense aspect in order to actual profit.

V. CONCLUSION

TradeCard is an example of a successful Internet-based start-up proposing an online substitute to a traditional bank based letter of credit (L/C). It proposes itself as trust building platform for the process of online negotiations on trade transaction and the related payment through the Tradecard substitute for L/C. TradeCard focuses on what is often considered a critical bottleneck in international trade transactions: lack of inexpensive and efficient system for cross border trade payment settlement. In March 2001, TradeCard introduced an automated, collaborative, global trade settlement platform which claims to streamline and automate the processing of virtually any payment transaction.

Bolero acts as a neutral third party to ensure highly secure electronic delivery and receipt of the information along the entire trade chain from front-end order processing and
management, through to back-office trade document exchange and payment. In addition to a common technology platform, bolero.net provides an unified legal structure that binds together all parties involved in international trade (importers, exporters, shipping agents, freight forwarders, customs and international banks). After extensive consultation with the industry, Bolero issued a Rule Book, which allows any dispute to be resolved in the same way it would be with paper documentation. Signing up to the Rule Book is a precondition to using Bolero. Combining technological platform and a legal framework is its distinct feature.

This an e-Trade's settlement method Trade Card and Bolero. This can do a trade cost settlement safely. Currently, this has small settlement unit very much. The future will deal existing a trade cost settlement method but. Consequently, the e-Trade must become the upgrade. But the upgrade must be processed around a trade platform. And One-Stop Service must consist to Single Window form. We must have R&D support of the government and investment of companies which is active to the conclusion.

Reference

Hart and Saunders, 1997


A Study on the Specific Requirements of Loading and Discharge of the Goods in the Credit Transactions

Soon-Hwan Jeon
Professor, Dept. of International Trade, Joongbu University, Korea

The ICC published the International Standard Banking Practice for the Examination of Documents under Documentary Credits (ISBP) as a practical complement to UCP 500 in January 2003. ISBP further clarifies the relationship to the UCP 500. That is to say, this document does not amend UCP 500. ISBP is a supplement to UCP 500, not a replacement for it. It explains how the practices articulated in the UCP are to be applied by documentary practitioners. The purpose of this study is to examine the requirements of taking up transport documents on the basis of provisions relating to loading and unloading of the goods in the UCP 500 and ISBP.

Key words; UCP, ICC, ISBP, Letter of Credit, Documents Examination

I. Introduction

Letters of credit are an important source of assurance of payment for trade and commerce because of its central role in international trade and commerce. Most letters of credit are issued in accordance with standard international letter of credit practice and are subject to published rules, that is, the ICC's Uniform Customs and Practice for Documentary Credits, 1993 revision, ICC Publication No. 500 (UCP 500). Anyway, Documentary credit practice is normally not regulated by law, but by the ICC's UCP 500, and by the ICC's eUCP and ISBP that complements it. Of course, the ICC Rules cannot substitute for the law in all situations.

UCP 500 is applied to the Documentary credit transactions. However, to reduce documentary discrepancies by defining correct document examination practice more precisely than hitherto, ISBP was approved by the ICC Banking Commission in October 2002 and

Under the introduction of the ISBP, the international standard banking practices documented in this publication are consistent with the UCP and the Opinions and Decisions of the ICC Banking Commission. The document does not amend UCP. It explains how the practices articulated in the UCP are to be applied by documentary practitioners. The ISBP has arisen to assist users and practitioners in relation to international standard banking practice and in particular, to further clarify the meaning of Article 13 of the UCP 500 as well as a need for greater documentary coverage within the UCP.

The provisions relating to transport documents is stated in Article 23 to 29 of the UCP 500, in Para. 73 to 182 of the ISBP. That is, UCP 500 states a marine bill of lading(Article 23), a non-negotiable sea waybill(Article 24), a charter party bill of lading(Article 25), a multimodal transport document(Article 26), an air transport document(Article 27), a road, rail or inland waterway document(Article 28), and courier and post receipts(Article 29) respectively. But, ISBP states a marine bill of lading(Para. 73 to 99), a charter party bill of lading(Para. 100 to 119), a multimodal transport document(Para. 120 to 143), an air transport document(Para. 144 to 169), a road, rail or inland waterway document(Para. 170 to 182) respectively.

The purpose of this study is to examine the requirements of taking up transport documents on the basis of provisions relating to loading and unloading of the goods in the UCP 500 and ISBP.

II. The Provisions stated in the UCP 500

Where the credit calls for a marine or ocean bill of lading, the requirements are set out in Article 23 of the UCP 500. Where the credit calls for transport documents apart from the bill of lading, the requirements are set out in Article 24 to 29. The provisions relating to transport documents apart from the bill of lading are modelled on Article 23.

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2) http://www.iccuk.net/newspubspopups/pressreleaseISBP.html.
Accordingly, transport documents apart from the bill of lading will be study by way of comparison with provisions of bill of lading to avoid unnecessary repetition.

2.1. Indication that the goods have been shipped or taken in charge by the carrier

2.1.1. Indication of loaded on board or accepted for carriage

Bills of lading and non-negotiable sea waybills must indicate that the goods have been loaded on board or shipped in a named vessel.3) This may be indicated by pre-printed wording on the document. If it is not, the loading on board must be evidenced by a notation on the bills of lading which gives the date on which the goods have been loaded on board.4) If follows from this that a “received for shipment” bill of lading which contains no such notation is not acceptable unless the credit expressly calls for or permits it.5) Even if such a document is by the custom of the trade a usual document the bank must refuse it unless the credit authorises its acceptance.6)7)

Under Articles 26(a)(ii), 27(a)(ii) and 28(a)(ii), multimodal transport documents, air transport document and road, rail and inland waterway documents must indicate that the goods have been “dispatched, taken in charge or loaded on board (in the case of multimodal transport document)”, “accepted for carriage (in the case of air transport document)” and “received for shipment, dispatch or carriage or wording to this effect (in the case of road, rail or inland waterway transport document)” respectively. Unlike Articles 23 and 24, these documents do not require evidence of actual shipment on one of the means of transport.8)

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3) UCP 500 Article 23(a)(ii), 24(a)(ii), 25(a)(iv). The bill must relate solely to the goods which form the subject-matter of the credit. In International Banking Corporation v Irving National Bank 283 F. 103, the credit called for drafts accompanied by a bill of lading for “Manila” hemp, but the documents which were tendered to the bank were drafts to which were attached bills of lading for “general merchandise contents unknown”. The drafts were paid by the bank, but in delivery only a portion of the consignment was found to consist of “Manila” hemp. It was held that the bank was entitled to an indemnity against its customer to the extent only to which the consignment consisted of “Manila” hemp.

4) UCP 500 Article 23(a)(ii), 24(a)(ii), 25(a)(iv). This must be a separate date from the date of issue of the document.

5) The reasoning would seem to be that a “received for shipment” bill of lading, in the absence of agreement or custom to the contrary, in not a good tender under a c.i.f. contract for the sale of goods: Diamond Alkali Export Corporation v Bourgeois [1921] 3 KB 443.


8) The term “means of conveyance” has the meaning of a single vehicle (e.g. vessel, aircraft, truck) whereas the term
2.1.2. The evidence of date of shipment or loading on board

In the case of bills of lading and non-negotiable sea waybills, where a clause indicating that the goods have been loaded on board a named vessel or shipped on a named vessel was indicated by pre-printed wording on the bill of lading, the date of issuance of the bill of lading will be deemed to be the date of loading on board and the date of shipment. However, where a notation which gives the date on which the goods have been loaded on board a named vessel was indicated on the bill of lading, the date of the on board notation will be deemed to be the date of shipment.9)

UCP 500 Sub-Article 26 a) ii Para. 2 provides that Dispatch, taking in charge or loading on board may be indicated by wording to that effect on the multimodal transport document and the date of issuance will be deemed to be the date of dispatch, taking in charge or loading on board and the date of shipment. However, if the document indicates, by stamp or otherwise, a date of dispatch, taking in charge or loading on board, such date will be deemed to be the date of shipment.

UCP 500 Sub-Article 27 a) iii provides that where the Credit calls for an actual date of dispatch, indicates a specific notation of such date, the date of dispatch so indicated on the air transport document will be deemed to be the date of shipment. For the purpose of this Article, the information appearing in the box on the air transport document (marked “For Carrier Use Only” or similar expression) relative to the flight number and date will not be considered as a specific notation of such date of dispatch. In all other cases, the date of issuance of the air transport document will be deemed to be the date of shipment.

UCP 500 Sub-Article 28 a) ii Para. 2 provides that The date of issuance will be deemed to be the date of shipment unless the transport document contains a reception stamp, in which case the date of the reception stamp will be deemed to be the date of shipment.

“mode of transport” means the type/nature of the transport (e.g. transport by sea, transport by air, transport by road). That both terms are not synonymous is evident from the context in which they are used in a number of provisions, i.e. in UCP 400 [e.g. sub-Article 25(c), Article 28, sub-Article 29(a), sub-Article 44(b) and (d), UCP 500 (e.g. sub-Article 26(a), sub-Article 28(c) and (d), sub-Article 40(b), Incoterms 1990 (various places)]; Gary Collyer & Ron Katz, Collected Opinions 1995-2001, Publication No. 632, ICC Publishing S.A., 2002, R 240, Ref 241, p.398

9) UCP 500 Articles 23(a)(ii), 24(a)(ii) and 25(a)(iii)
2.1.3. Indication of on board notation as to the port of loading and the vessel named

A shipped bill of lading is required, and a received for shipment bill will not do. Article 23(a)(ii) continues by setting out in greater detail exactly how the bill of lading must indicate loading in board, and in particular requires the vessel to be named, even where the bill of lading contains an indication such as “intended vessel” and the goods have in fact been loaded on board the intended vessel. 10)

Under Articles 23 and 24 (the provision of ocean bill of lading and non-negotiable sea waybill), where the words “intended vessel” is indicated on the transport documents, an on board notation must include the date on which the goods have been loaded on board and the name of the vessel on which the goods have been loaded, even if they have been loaded on the vessel named as the “intended vessel”. This is to evidence that they have been loaded on board vessel intended. Where the words “a place of receipt or taking in charge different from the port of loading” is indicated on the transport documents, an on board notation must also include the port of loading stipulated in the Credit and the name of the vessel on which the goods have been loaded, even if they have been loaded on the vessel named in the bill of lading. This provision also applies whenever loading on board the vessel is indicated by pre-printed wording on the bill of lading.

However, there is no provision in relation to the above prevision, in the case of charter party bill of lading, multimodal transport document, air, road, rail and inland waterway documents.

2.2. Indication of the port of loading and the port of discharge

Bills of lading and non-negotiable sea waybills must indicate the port of loading and the port of discharge stipulated in the Credit. 11) Likewise, Under Articles 26(a)(iii), 27(a)(iv) and 28(a)(iii), multimodal transport documents, air transport document and road, rail and inland waterway documents must indicate “the place of taking in charge and the place of final destination stipulated in the credit”, “the airport of departure and the airport of destination stipulated in the credit”, and “the place of shipment and the place of destination stipulated in the credit”, and “the place of shipment and the place of destination.

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11) UCP 500 Article 23(a)(iii), 24(a)(iii), 25(a)(v).
tion stipulated in the credit” respectively.

2.2.1. Indication of a place of taking in charge different from port of loading and/or discharge

If only bill of lading and non-negotiable sea waybill indicates the port of loading and the port of discharge stipulated in the Credit, even if it indicates a place of taking in charge different from the port of loading, and/or a place of final destination different from the port of discharge, it would be accepted by the bank.12) Likewise, if only multimodal transport document indicates the place of taking in charge and the place of final destination stipulated in the Credit, even if it indicates the place of taking in charge stipulated in the Credit which may be different from the port, airport or place of loading, and the place of final destination stipulated in the Credit which may be different from the port, airport or place of discharge, it would be accepted by the bank.13)

However, these provisions are not stated in the UCP 500 Articles 25, 27 and 28. That is, the Article 25(a)(ⅴ), 27(a)(ⅳ) and 28(a)(ⅲ) states only the provision that charter party bill of lading, air transport document and road, rail and inland waterway documents must indicate “the port of loading and the port of discharge stipulated in the Credit”, “the airport of departure and the airport of destination stipulated in the credit”, and “the place of shipment and the place of destination stipulated in the credit” respectively.14)

2.2.2. Indication of “intended” the vessel and/or port of loading and/or port of discharge

If only bill of lading and non-negotiable sea waybill indicates the port of loading and the port of discharge stipulated in the Credit, or if only multimodal transport document indicates the place of taking in charge and the place of final destination stipulated in the Credit, even if it contains the indication “intended” or similar qualification in relation to

12) UCP 500 Article 23(a)(ⅲ), 24(a)(ⅲ).
13) UCP 500 Article 26(a)(ⅲ)(a).
14) A place of taking in charge different from the port of loading is not exist, because the charter party bill of lading is issued when the goods are loaded on board at the port of loading. A place of final destination different from the port of discharge is also exist, because the charter party is concluded to transport the goods by sea for transportation to the port of discharge by the vessel named. Accordingly, UCP 500 does not permit these provisions, unlike Articles 23 and 24.
the port of loading and/or port of discharge, it would be accepted by the bank. However, these provisions are not stated in the UCP 500 Articles 25, 27 and 28.

### III. The Provisions stated in the ISBP

Where the credit calls for a marine or ocean bill of lading, the requirements are set out in Para. 73 to 99 of the ISBP. Where the credit calls for transport documents apart from the bill of lading, the requirements are set out in Para. 100 to 169. The provisions relating to transport documents apart from the bill of lading are modelled on Para. 73 to 99. Accordingly, transport documents apart from the bill of lading will be study by way of comparison with provisions of bill of lading to avoid unnecessary repetition.

#### 3.1. On board Notation, goods accepted for carriage and date of shipment

##### 3.1.1. On board Notation, goods accepted for carriage and date of shipment

ISBP Para. 78 and 104 provides that, “If a pre-printed “Shipped on board” bill of lading or charter party bill of lading is presented, its issuance date will be deemed to be the date of shipment unless it bears a separate dated on board notation, in which event the date of the on board notation will be deemed to be the date of shipment whether or not the on board date is before or after the issuance date of the bill of lading”.

On the other hand, in the case of air transport document, ISBP Para. 149 provides that, “an air transport document must indicat e that the goods have been accepted for carriage”. ISBP Para. 150 provides that, “If a credit indicates that an actual date of dispatch must appear on the air transport document, the document must contain a separate notation that provides this information. This date of dispatch will be considered as the date of shipment. Information contained in the boxes typically titled “For Carrier Use Only” will not be considered for determining the actual date of dispatch.” Further, ISBP Para. 151 provides that, “If no actual date of dispatch is required by the credit to be shown on the document, the date of issuance of an air transport document will be deemed to be the date of dispatch, even if the document shows a flight date and/or a flight number in the box

15) UCP 500 Article 23(a)(iii), 24(a)(iii), 26(a)(iii)(b).
marked "For Carrier Use Only" or similar expression. If the actual flight date is shown as a separate notation, but is not required by the credit, it will be disregarded in determining the date of shipment."

3.1.2. Definition of shipment

ISBP Para. 79, 105 and 126 provides that, “Shipped in apparent good order”, “Laden on board”, “clean on board” or other phrases incorporating words such as “shipped” or “on board” have the same effect as “Shipped on board”.

For example, if the credit stipulates full set of clean on board marine bills of lading without indicating “combined transport bills of lading acceptable” or a similar expression, Article 26 applies. This means inter alia that the bill of lading to be presented may bear the title “combined transport bill of lading” but its data content must be that of a marine bill of lading, which means that it should be a port-to-port movement of cargo, i.e. not a combined transport, despite the heading of the document. This covers the practice whereby some carriers use the same document for a marine bill of lading or for a combined transport bill of lading, the difference being that a few extra pieces of information are included when the document is used as a combined transport bill of lading.\(^\text{16}\)

3.2. Ports of loading, ports of discharge, place of taking in charge, loading on board and destination, airports of departure and destination

3.2.1. Ports of loading, place of taking in charge, loading on board, airports of departure

ISBP Para. 80 provides that, “While the named port of loading, as required by the credit, should appear in the port of loading field within the bill of lading, it may instead be stated in the field headed “Place of receipt” or the like, if it is clear that the goods were transported from that place of receipt by vessel, and provided there is an on board notation evidencing that the goods were loaded on that vessel at the port stated under “Place of receipt” or like term.”

For example, under a letter of credit which required shipment from Bangkok to

Kuwait, the transport document shows the goods where the bill of lading was issued in the following format; “Pre-carriage: Vessel A”, “Place of receipt: Bangkok, Thailand”, “Vessel Voy. No.”, “Vessel B Port of loading: Singapore”, “Port of discharge: Kuwait”, “Place of delivery: Kuwait/CFS”, The above information was shown in the respective pre-printed boxes. The B/L further stated the following at the bottom of the document: ‘Laden on board the vessel Vessel A, May 9, 1999. Port of loading Bangkok, Thailand’. The conclusion given stated that the on board notation which incorporated, not only the name of the vessel but also the port of loading specified in the credit, rendered the bill of lading as being acceptable. This was despite the fact that the port of Singapore was quoted in the pre-printed ‘port of loading’ box within the bill of lading. The point at issue within this enquiry is whether the words ‘port of loading’ need to appear before the name of the actual port in any on board notation. Whilst inclusion of the words ‘port of loading’ place added emphasis on the information contained in the on board notation, there is no specific requirement for these words to appear if the place specified is the port mentioned in the credit or is within any given range for which a port may be chosen (i.e. shipment from any European port).

In another example, under a credit calling for on board ocean bills of lading and shipment from any port of Ireland to Huangpu, Guangzhou, China, with transhipment being allowed, the bill of lading shows Dublin as place of receipt of the goods and loading on board a named vessel at Tilbury (not a port of Ireland), and it does not indicate the name of the pre-carrier and the way of the onward routing from the place of receipt to the port of loading. “Shipment” is the generic term for “loading on board, dispatch and taking in charge” (as per the heading preceding Article 50 UCP); it means loading on board when used in connection with an ocean bill of lading. Therefore, it was necessary for the ocean bill of lading to evidence an Irish port as port of loading in order to be in compliance with the terms of the credit. This was not the case; therefore, the bill of lading was not compliant. The fact that the goods were received in Dublin and forwarded to Tilbury (as pre-carriage) for loading on board does not have any relevance.

On the other hand, ISBP Para. 152 provides that, “Air transport documents must in-

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dicate the airport of departure and airport of destination as stated in the credit. The identification of airports by the use of IATA codes instead of writing out the name in full (e.g., LHR instead of London Heathrow) is not a discrepancy.”

3.2.2. Ports of discharge, place of destination and airports of destination

ISBP Para. 81 provides that, “While the named port of discharge, as required by the credit, should appear in the port of discharge field within the bill of lading, it may be stated in the field headed “Place of final destination” or the like if it is clear that the goods were to be transported to that place of final destination by vessel, and provided there is a notation evidencing that the port of discharge is that stated under "Place of final destination" or like term.”

For example, under a letter of credit which required full set of clean on board ocean bills of lading evidencing shipment from New Zealand Port to Inchon, Korea, the bill of lading shows Napier, NZ as port of loading of the goods, Pusan as port of discharge, Inchon as place of final destination. An ocean bill of lading that indicated “Pusan” as the port of discharge was not in compliance with the terms and conditions of the credit and is therefore unacceptable.19)

In another example, where a letter of credit called for a bill of lading which stipulated “shipment to Penang, Malaysia” together with “transhipment prohibited”, the bill of lading indicated Kobe, CFS as place of receipt, Kobe, Japan as port of loading of the goods, Port Kelang as port of discharge, Penang, Mal. as place of delivery. The credit stipulated shipment to Penang, which means that Penang was to be port of discharge/port of destination. Therefore, it seems that the bill of lading was not acceptable under the term of the credit. Under UCP Article 29(c)(iv), banks will accept transport documents which state or indicate the place of final destination as “C.F.S.” at, or associated with, the port of destination. The bill of lading presented indicated “port Kelang” as port of discharge and “Penang, Malaysia CFS” as place of delivery. It may be that “Penang, Malaysia CFS” is associated with “Port Kelang”, but this is not significant since “Port Kelang” is not the port of discharge/destination stipulated in the credit. It could be argued that the instrument should be acceptable, since in the terms of Article UCP 400 29(c)(iv),

“Kobe CFS” is the “container freight station at the port of loading”, and it may be assumed that “Penang, Malaysia CFS” is the “Container freight station associated with the port of destination.” But the bill of lading says “Port of Discharge” and “Place of Delivery” whereas the wording of the Article is “port of destination”. The “place of final destination” should be irrelevant.20)

3.2.3. CY or CFS as the place of receipt and port of loading

ISBP Para. 82 provides that, “If a Container Yard (CY) or Container Freight Station (CFS) is stated as the place of receipt and that place is the same as the stated port of loading (e.g., Place of Receipt: Hong Kong CY; Port of Loading: Hong Kong), these places are deemed to be the same, and therefore the specification of the port of loading and the name of the vessel in the “on board” notation are not necessary.” However, there is no provision of transport document in the ISBP other than that of bill of lading.

For example, if the place of receipt is indicated on a bill of lading as the ‘Hong Kong (CY)’ with the port of loading indicated as ‘Hong Kong Port’. would this be considered as a different place, bearing in mind that the Hong Kong Container Yard (CY) is a part of Hong Kong Port. Using your example where a place of receipt is given as “Hong Kong CY” and the port of loading is shown as “Hong Kong”, they are to be deemed one and the same place and therefore not subject to the provisions of sub-Article 23(a)(ii).21) In this case, it is not necessary to indicate the port of loading and the name of vessel in the ‘on board’ notation because these places(such as ‘Hong Kong (CY)’, ‘Hong Kong Port’) are deemed to be the same.

3.2.4. Geographical area or range of ports of loading and/or discharge

ISBP Para. 83 provides that, “If a credit gives a geographical area or range of ports of loading and/or discharge (e.g., “Any European Port”), the bill of lading(or charter party bill of lading) must indicate the actual port of loading and/or discharge, which must be within the geographical area or range quoted.”

ISBP Para. 106 (the provision of charter party B/L) is identical to the provision of

20) Jan Dekker, op.cit., ICC Publication 489, Case 246.
ocean bills of lading (Para. 83), except for the addition of the words “but may show the geographical area or range of ports as the port of discharge”. ISBP Para. 127 (the provision of multimodal transport document) is identical to the provision of ocean bills of lading (Para. 83), except for the substitution of the words multimodal transport document for bill of lading, and the words a geographical area or range of ports of loading and/or discharge for geographical range for the place of taking in charge, dispatch, loading on board and destination. ISBP Para. 153 (the provision of air transport document) is identical to the provision of ocean bills of lading (Para. 83), except for the substitution of the words air transport document for bill of lading, the words airports of departure and/or destination for ports of loading and/or discharge, and the word airport for port. However, there is no provision in relation to the above provision, in the case of road, rail or inland waterway document.

For example, under a credit calling for “clean on board” ocean bills of lading and shipment from a main European port to Singapore together with “transhipment prohibited”, a combined transport bill of lading indicating Antwerp CFS as place of receipt and Rotterdam as loading port was presented. In this case, there is no discrepancy because Rotterdam which the goods are taken on board is a “main European port” as stipulated in the credit terms. That is, it should not be rejected for showing a place of receipt different from the port of loading. The precarriage from Antwerp CFS to Rotterdam is irrelevant. The decisive point is that the goods are taken on board in Rotterdam which, no doubt, is a “main European port” as stipulated in the credit terms. The transhipment question does not arise since Rotterdam is where the actual voyage starts.22)

However, in another example, under a credit calling for an ocean bills of lading covering a shipment from Denmark to Manila, an ocean bill of lading indicating “Copenhagen” as the place of receipt, “Hamburg” as the port of loading, “ms. Alexandra” as the name of the vessel, “Kaohsiung” as the port of discharge, and “Manila” as the place of delivery was presented. In addition, the ocean bill of lading bears a notation reading, “shipped on board ms. Anna at Copenhagen on......(date indicated). Shipment from Kaohsiung to Manila will take place by vessel”. An ocean bill of lading indicating date as stated under “Issue” is not acceptable under a credit that stipulates a shipment from Denmark to Manila. The UCP 500 sub-Article 23(a)(iii) provision has to be applied strictly.23)*

22) Jan Dekker, op. cit., ICC Publication No. 459, Case 95.

23)
Also, in the other example, where a letter of credit called for a marine bill of lading covering “any Japanese Port” as the port of discharge, a marine bill of lading showing “any Japanese Port” as port or discharge was presented. Regarding this situation, the majority of our experts believe that if a credit stipulates “any Japanese Port” as the port where the goods are to be discharged, it is still necessary for the marine bill of lading to specify the port in Japan where the goods will be discharged. Otherwise, the consignee would be unable to see from the document where he can take delivery of the goods shipped.24)

However, a charter party bill of lading differs from a marine bill of lading. For example, where a letter of credit called for a marine bill of lading indicating “for transportation to: South China port”, a shipped on board charter party bill of lading was presented showing as port of discharge “one South China port”. With a charter party, the nature of the contract of carriage is not so clear-cut, since it is known that a charter party may well be concluded on the basis of the cargo being taken to a geographical area (rather than a specified port). When the buyers and sellers have not, at the time, decided upon the actual port, the ship will carry the cargo on a “for orders” basis, i.e, the master/owners will be notified in due course as to the port to which delivery should be made. Given the nature of charter party agreements and in the absence of any instructions to the contrary in the L/C, it is considered that the charter party bill of lading was acceptable showing discharge at “one South China Port”.25)

IV. Conclusion

In relation to credits calling for each of these types of documents, the relevant provision of the ISBP is framed in terms that “If a credit requires presentation of a transport document covering a port-to-port shipment (a charter party bill of lading covering a port-to-port shipment, a transport document covering transportation utilizing at least two modes of transport, a transport document covering an airport-to-airport shipment, a transport document covering movement by road, rail or inland waterway respectively), UCP

24) Jan Dekker, op. cit., ICC Publication No. 489, Case 240.
Article 23 (UCP Article 25, UCP Article 26, UCP Article 27, UCP Article 28 respectively) is applicable” and then the provisions are set out. That is, Para. 73 to 161 of ISBP that is a supplement to UCP 500 provide what the contents of documents evidencing each type of transport (sea, air, rail, road or inland waterway or multimodal transport) should or may contain. They envisage that credits will call for the following types of document: ocean/marine bills of lading covering port to port shipment (Para. 73~99), charter party bills of lading (Para. 100~119), multimodal transport documents (Para. 120~143), air transport documents (Para. 144~169), road, rail and inland waterway transport documents (Para.170~182).

Under the UCP 500 and ISBP, the important requirements of taking up transport documents on the basis of provisions relating to loading and unloading of the goods are as follows;

First, the transport documents must indicate that the goods have been “loaded on board or shipped in a named vessel”, “dispatched, taken in charge or loaded on board”, “accepted for carriage” and “received for shipment, dispatch or carriage or wording to this effect” respectively.

Second, in the case of the shipped transport document, its issuance date will be deemed to be the date of shipment, but in the case that it bears a separate dated on board notation, the date of the on board notation marked in its document will be deemed to be the date of shipment. In these cases, the phrases “Shipped in apparent good order”, “Laden on board”, “clean on board”, or the like have the same effect as “Shipped on board”.

Third, the transport documents must indicate “the port of loading and the port of discharge stipulated in the Credit”, “the place of taking in charge and the place of final destination stipulated in the credit”, “the airport of departure and the airport of destination stipulated in the credit”, and “the place of shipment and the place of destination stipulated in the credit” respectively.

However, the named port of loading and discharge required by the credit may be stated in the field headed “Place of receipt” and “Place of final destination” or the like within the bill of lading respectively, provided there is an on board notation evidencing that the goods were loaded on that vessel at the port stated under “Place of receipt”, or that the port of discharge is that stated under "Place of final destination" or like term.
Forth, where a place of receipt is given as “Hong Kong CY” and the port of loading is shown as “Hong Kong”, they are to be deemed one and the same place.

Fifth, if a credit gives a geographical area or range of place of loading and/or discharge (e.g., “Any European Port”), the transport documents must indicate “the actual port of loading and/or discharge”, “the place of taking in charge, dispatch, loading on board and destination” and “airports of departure and/or destination” which must be within the geographical area or range quoted.

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An Impulsive Buying behavior of Korea Consumer on TV Home Shopping*

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The central purpose of this paper is to examine impulsive buying from home shopping channels and to investigate some stimulating factors on the customers’ impulsive buying on TV. Survey questionnaires were given to 303 customers who have purchased products through TV home shopping more than once. We report the following findings. First, we find that product stimuli factors exert an effect on impulsive buying of fashion goods, but not of specialty goods. Second, of the two promotion stimuli factors—a bonus pack and an extended payment period—the latter is shown to have a great effect. Third, in the case of price stimuli factors, concrete stimuli such as a discount range have a greater influence than abstract stimuli such as a reliable pricing. Fourth, in the area of situational stimuli factors, speeches of show hosts have a bigger impact than buying situations such as limit selling. Finally, we compare the two factors, watching with other people and watching for a long time, and find that the latter influences impulsive buying more. We believe that the current research provides a significant result, theoretically and practically, with respect to customers’ behavior in TV home shopping. The methodological limitation involving samples and sampling method and the regional limitation make it difficult to generalize the findings. It should be worthy classifying and managing marketing stimuli. More practical research is in order.

Key words: Impulsive Buying, TV Home shopping

I. Introduction

TV home shopping1) has changed the concept of television by adding a role of marketing path to the traditional roles of entertainment and information provider. In Korea, CJ(39 Shopping) and GS shopping(Korean Home Shopping) channels started this new type of marketing in 1985. The market has grown annually by 76% since then to 2002. We have witnessed the emergence of a monster market, since now home shopping channels

* This paper was supported by research fund from Nam Seoul University for the 2005 school year.
handle about $4 billion and 10,000 firms participate in the market. (www.jed.co.kr)

TV home shopping clearly has some merits. It saves times, is convenient and it provides more shopping opportunities. However, it is very likely to cause impulsive purchasing due to the one-way delivery of product information and the lack of product comparison. (Darian 1987, Hwang 2003, Lee & Cho 2003). It is reported that 73.3% of home shoppers have experienced impulse of buying. 2)

Impulsive buying refers to an unplanned buying that happens when exposed to stimuli without any prior intention to buy a product. It happens suddenly and instantly without any intention to buy a particular product. Most researches on impulsive buying have been carried out in off-line stores (Stern 1962, D'antony et. al. 1973, Prion 1991; Beatty et al, 1994; Rook & Fisher, 1995; James 1987; Shim, Drake 1990). Some scholars have investigated impulsive buying in internet shopping malls and TV home shopping channels from the perspective of home economy and customer economy. (Lee & Cho 2002, Lee & Park 2001, Seo & Kim 2003) The main focus of these studies is how to protect customers and home economy. In other words, they are not so much interested in marketing channels as in the rights of customers.

Considering the size of the TV home shopping market and the number of customers, it is essential that we, from the perspective of marketers, attempt to comprehend customers' behavior and manage it in a strategic sense. It has been reported that psychological, product, marketing, and demographical factors influence customers' impulsive buying. But, most of them deal with offline stores and use structured psychological factors. Also, the previous studies have not developed more than providing theoretical models. The present study attempts to classify real stimuli factors that lead customers to buy products impulsively and to examine their influencing power. We have performed literature review of previous studies what factors stimulate and lead customers to impulsive buying. Then we carry out a practical analysis to reach an answer to some selected questions/hypotheses. Those who have purchased a product at least once from TV home shopping were chosen as our subjects. A survey questionnaire was given to the group of 303 people. SPSS 10.0 model is used for the statistical analysis.
II. Characteristics of TV home shopping and customers' impulsive buying

2.1. The present of TV home shopping

As of the first half of 2005, five home shopping channels (CJ, GS, Hyundai, Woori, Nongsoosan) have recorded the total sale of about $2.2 billion, which is higher than last year by 15%. All of the five channels now consider entering the internet open market in the second half of the year.

Chart 1. Size of TV home shopping market (in 100 million Won)

<table>
<thead>
<tr>
<th>Index</th>
<th>'98</th>
<th>'99</th>
<th>'00</th>
<th>'01</th>
<th>'02</th>
<th>'03</th>
<th>'04</th>
<th>'05</th>
</tr>
</thead>
<tbody>
<tr>
<td>TV Home shopping</td>
<td>7810</td>
<td>9040</td>
<td>13460</td>
<td>20480</td>
<td>41760</td>
<td>56960</td>
<td>76000</td>
<td>97600</td>
</tr>
<tr>
<td>(growth rate)</td>
<td>(18%)</td>
<td>(49%)</td>
<td>(52%)</td>
<td>(104%)</td>
<td>(38%)</td>
<td>(33%)</td>
<td>(28%)</td>
<td></td>
</tr>
</tbody>
</table>


The sales from this market have excelled those of offline stores. And one might claim that Korea has accumulated more advanced knowhow than most of the advanced countries.

TV home shopping has unique characteristics from the perspective of both industry and customers. As far as industry goes, many merits can be listed; potential demand development, more effective use of the TV media, predictability of information basis demand, expansion of the market, and less cost of distribution. However, it also has some demerits; limited list of products for sale, loss of payment, danger of damage and returns, necessity for an effective distribution system, extra cost of shipping and returns, and difficulties in customer service. From the angle of customers, it is not easy to inquire product information or to get a solution to their complaints. And the danger of leaking personal information always exists. However, the two biggest demerits would be the possibility of impulsive buying and lack of comparative buying (Jeong 2001).

The previous studies have focused on (i) characteristics of home shoppers (James et al, 1987; Shim, Drake, 1990), (ii) influencing factors on customers (Kim & Goo 1997, Yang & Jeong 1999, and Lee 2001), and (iii) possibility of impulsive buying and its effects (Hong 1991, Lee, H. 1998, Jeong, J. 1999). All the studies agree that the characteristics of TV home shopping are mainly responsible for customers' impulsive buying. From the perspective of business, it is a marketing stimulus for customers' need arousal.
to cause their impulsive buying. This stimulus lets customers recognize the gap between the actual state and the ideal state. It would be desirable for shopping marketers to clearly understand stimuli factors for impulsive buying and to effectively manage them.

2.2. Concept and types of impulsive buying

Rook & Fisher(1995) defines impulsive buying as 'buying behavior from customers' buying impulsiveness'. Here 'buying impulsiveness' refers to the propensity to purchase spontaneously, unreflectively, and immediately. An impulsive act is an act that is the immediate responses without deliberation to the presentation of a stimulus(Wolman 1973). It is conceptually similar to unplanned purchase that happens without any prior intention to purchase. According to Kollat & Wilet(1967), it means 'immediate purchase without any plan'. Stern(1982) has classified impulsive buying into four categories as in the following. He also introduced the notion of 'Impulse Mix'.

(i) pure impulse buying : A general type of impulse buying. This is a true impulsive buying. Customers may buy something unique or new from internal impulse. It deviates from a normal and usual buying pattern.

(ii) reminder impulse buying : When a buyer sees a product, he/she may recall lack of its stock, its advertisements, or his/her past decision-making process and buy it. What is important is that buyers may recall knowledge and experience of the product.

(iii) suggestion impulse buying : Even without any prior knowledge of a certain product, customers may visualize the need for that product. What is different from reminder impulse buying is the lack of prior knowledge.

(iv) planned impulse buying : Even with intension to buy a certain product, customers may decide to buy it based on good terms of sale such as discount or free gifts.

The classification of impulse buying based on customers' psychology focuses on the processes of marketing stimulation and need arousal. In order to understand impulse buying for practical use, it is essential to understand impulse buying as 'unplanned buying'. Cho(1999) notes that research focusing on customers' subjective experiences. In this paper we assume a more broad notion of impulse buying. When exposed to a stimulus situation, customers without any prior intention may respond to the stimulus and show an unreasonable and emotional behavior to buy. We target any impulsive buying
through watching TV home shopping channels and responding a variety of stimuli.

III. Stimuli factors of impulsive buying and the hypotheses

We classify the stimuli factors of impulsive buying into marketing stimuli, situational stimuli and consumer characteristics.

3.1. Marketing stimuli to impulse buying

3.1.1. product factor

Product factor is a crucial one for impulse buying. These may include sophisticated design, trendy and unique products(Seo & Kim, H. 2004). Impulsive buyers are not usually attracted by cognitive evaluation of intrinsic properties such as features and quality of a product but by external ones such as design and package and their emotional tie with the recent trend(Hong 1991). Thus, fashionable everyday products may have a greater effect on impulse buying than those that require customers' expertise and evaluation. TV home shopping uses a limited time of broadcasting to provide product information and evaluation standards. That is why convenience and fashion products are more on sale than speciality ones. Fashion products are usually lower in knowledge and involvement level and thus are more likely to cause impulsive buying than speciality ones. Along the line of this thought, we have set up the following hypothesis.

Hypothesis 1: More impulse buying will happen for fashion products than special goods

3.1.2. promotion factor

Promotion factor in TV home shopping should be different from offline stores. TV home shopping channels may use similar promotions, but, due to its unique characteristics, the main ones used are free gifts and terms of payment(Seo & Kim, H. 2004). We assume that the stimulus like a special discount belong to the price factor. Free gifts, premiums and extended period of payment are typical promotions(Lee, E. & Cho, E. 2001). Customers take some of those promotions as valuable and reconsider the rea-
sonableness of buying the product. In TV home shopping where credit cards are the main method of payment, extended period of payment could stimulate more than any others.

Hypothesis 2: The stimulus of period of payment is more influential than that of free gifts on impulse buying

3.1.3. price factor

The price of a product is an important factor for impulse buying (Lee, H. & Park, K. 2001). It is not true that a low price simply is preferred. Rather, customers show impulse buying when they value a discounted price or recognize a lower price from the comparison of prices (Lee, O. 2000). The price as a marketing stimulus usually causes an immediate response from customers. Especially, a bigger rate of discount rather than a reasonable discount may bring about impulse buying. The stimulus of informing viewers that a product is cheaper than other alternative markets is less influential than the rate of discount such as 50% off. In other words, we may conclude that specific price stimuli are more likely to lead customers to buy impulsively.

Hypothesis 3: Bigger discount are more powerful stimuli for impulse buying than lower prices

3.2. Situational stimuli for impulse buying

Impulse buying is influenced by customers' feelings (Yang 1995, Rook & Fisher, 1995). These customers' situations along with TV channels' situations can be factors of impulsive buying. Since the sales are made in a limited time, the role of show hosts or shopping hosts is crucial (Hwang 2003). The host should draw attention from viewers and let them absorbed in his/her explanation of products with flowing language. This situation might stimulate customers to buy impulsively. Moreover, the number of products on sale is limited due to the limited time of broadcasting. In particular, the limited number of products can be a crucial situational stimulus. Customers may be attracted by the host's speech and the limited number. We assume that the shopping host's persuasion is a greater factor than the limited sale.
Hypothesis 4: The shopping host's persuasion is a greater factor of impulse buying than the limited sale.

3.3. Consumer characteristics of impulse buying

Most research on impulse buying contain the factor of consumer characteristics (Yang & Jeong, M. 1999, Hwang 2003, Park, E. and Soh 2002). The factors usually involve demographical ones such as sex, age, profession, income, and education. Impulsive buying varies according to these variables. How to use TV home shopping is also shown to affect impulse buying. It is reported that the presence/absence of other viewers watching TV together and the length of watching TV also influence impulsive buying (Kim, C. 1996). The longer people watch TV, the greater the possibility of impulse buying becomes. When one watches TV with other people, he/she is more likely to buy impulsively (Yang 1995, Rook & Fisher, 1995). Of the two, we hypothesize that the long time of watching TV has a bigger influence on impulse buying than accompanied watching.

Hypothesis 5: Watching TV for a long time has a bigger influence on impulse buying than accompanied watching.

Fig. 1. Conceptual model of research

The conceptual model of the present study can be summarized in Fig. 1; stimuli
factors are independent variables and impulse buying experience is a dependent variable.

IV. Methods and results of the study

4.1. Research method and data under analysis

For practical research, we have used a survey questionnaire whose reliability and validity has been tested. The sample of the subjects is chosen from those who have experienced a product at least once from TV home shopping. The survey was conducted from May 27 to June 9, 2005. The answers from 303 respondents out of 400 were analyzed. The statistical regression analysis is performed by using SPSS WIN 10.0.

The characteristics of the subjects are as follows. 84(27.7%) respondents are male and 219(72.3%) are female. The majority is in the 20's: 131(43.2%). 36.0% are in the 30's and the 40's(13.9%) and the 50's(5.0%) follow. As far as their professions go, workers(37.1%), housewives(20.5%), professionals(11.9%), students(8.3%), and self-employed(3.6%) make the list in order. Education and income levels are evenly distributed.

4.2. Examination of hypotheses

The present study selects five stimuli factors: product, promotion, price, situation, and consumer characteristics. Each stimulus factor consists of two kinds of stimuli. And we attempt to see which of the two is more influential by using regression analysis. First, as to the product stimuli, we come to the conclusion that fashion products have an influence on impulsive buying, whereas specialty products do not.

Chart 2. Effect of product stimuli on impulsive buying (regression results)

<table>
<thead>
<tr>
<th>Product stimuli</th>
<th>impulsive buying</th>
</tr>
</thead>
<tbody>
<tr>
<td>specialty good</td>
<td>.102(1.169)</td>
</tr>
<tr>
<td>Fashion Good</td>
<td>.436 (6.366)***</td>
</tr>
<tr>
<td>R square</td>
<td>.114</td>
</tr>
<tr>
<td>F-values of Regression</td>
<td>20.333***</td>
</tr>
</tbody>
</table>

standard regression coefficient (t-values), *** p < .001, ** p < .01, * p < .05
Second, it is shown that both promotion factors-free gifts and the period of payment-affect on impulsive buying, but the latter is more influential.

**Chart 3. Effect of promotion stimuli on impulsive buying (regression results)**

<table>
<thead>
<tr>
<th>promotion stimuli</th>
<th>impulsive buying</th>
</tr>
</thead>
<tbody>
<tr>
<td>free gift</td>
<td>.182 (3.140)***</td>
</tr>
<tr>
<td>payment affect</td>
<td>.215 (3.790)***</td>
</tr>
<tr>
<td>R square</td>
<td>.101</td>
</tr>
<tr>
<td>F-values of Regression</td>
<td>16.874***</td>
</tr>
</tbody>
</table>

standard regression coefficient (t-values), *** p < .001, ** p < .01, * p < .05

Third, in the case of price-related stimuli, it is shown that a bigger discount rate exerts a greater influence on impulsive buying than a reasonable price stimulus.

**Chart 4. Effect of price stimuli on impulsive buying (regression results)**

<table>
<thead>
<tr>
<th>price related stimuli</th>
<th>impulsive buying</th>
</tr>
</thead>
<tbody>
<tr>
<td>reasonable price</td>
<td>-.083 (-1.183)</td>
</tr>
<tr>
<td>bigger discount rate</td>
<td>.236 (3.375)***</td>
</tr>
<tr>
<td>R square</td>
<td>.040</td>
</tr>
<tr>
<td>F-values of Regression</td>
<td>6.196***</td>
</tr>
</tbody>
</table>

standard regression coefficient (t-values), *** p < .001, ** p < .01, * p < .05

Fourth, in the area of situational stimuli, the shopping host's aggressive persuasion and information giving is shown to have a greater influence on impulsive buying than other situational stimuli such as the limited time of sale and the limited number of products on sale.

**Chart 5. Effect of situational stimuli on impulsive buying (regression results)**

<table>
<thead>
<tr>
<th>situational stimuli</th>
<th>impulsive buying</th>
</tr>
</thead>
<tbody>
<tr>
<td>host’s aggressive presentation</td>
<td>.158 (2.043)*</td>
</tr>
<tr>
<td>limited time &amp; product</td>
<td>.151 (2.280)*</td>
</tr>
<tr>
<td>R square</td>
<td>.075</td>
</tr>
<tr>
<td>F-values of Regression</td>
<td>12.153***</td>
</tr>
</tbody>
</table>

standard regression coefficient (t-values), *** p < .001, ** p < .01, * p < .05
Finally, the analysis shows that watching TV for a long time is more powerful in causing impulsive buying than watching with other people.

Chart 6. Effect of customer characteristics on impulsive buying (regression results)

<table>
<thead>
<tr>
<th>customer characteristics</th>
<th>impulsive buying</th>
</tr>
</thead>
<tbody>
<tr>
<td>watching with other people</td>
<td>-.161 (-2.971)**</td>
</tr>
<tr>
<td>long time TV watching</td>
<td>.343 (5.431)***</td>
</tr>
<tr>
<td>R square</td>
<td>.107</td>
</tr>
<tr>
<td>F-values of Regression</td>
<td>18.055***</td>
</tr>
</tbody>
</table>

standard regression coefficient( t-values), *** p < .001, ** p < .01, * p < .05

V. Concluding remarks

The current study, based on some previous studies, attempts to classify stimuli factors on impulsive buying and to examine their influencing power. We have set up and investigated five hypotheses. A survey of 303 TV home shoppers' experiences and responses was conducted to test the hypotheses. The results of the statistical analysis show that all of them are valid.

Chart 7. Results of hypothetical test

<table>
<thead>
<tr>
<th>Factor</th>
<th>Hypothesis</th>
<th>result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product Factor</td>
<td>More impulse buying will happen for fashion products than special goods</td>
<td>accept</td>
</tr>
<tr>
<td>Promotion Factor</td>
<td>The stimulus of period of payment is more influential than that of free gifts on impulse buying</td>
<td>accept</td>
</tr>
<tr>
<td>Price Factor</td>
<td>Bigger discount are more powerful stimuli for impulse buying than lower prices</td>
<td>accept</td>
</tr>
<tr>
<td>Situational Factor</td>
<td>The shopping host's persuasion is a greater factor of impulse buying than the limited sale.</td>
<td>accept</td>
</tr>
<tr>
<td>Consumer Factor</td>
<td>Watching TV for a long time has a bigger influence on impulse buying than accompanied watching.</td>
<td>accept</td>
</tr>
</tbody>
</table>

The present paper gives an insight in both theoretical and practical respects. We have attempted to classify stimuli factors on customers' impulsive buying. The sig-
significant relationship between these found in this study might provide a theoretical basis for a research model of impulsive buying. The practical value of the analysis might come from the fact that we have realistically classified and applied marketing stimuli, situational stimuli and consumer characteristics. Considering the growing popularity of TV home shopping channels, it would give a significant meaning to marketers who need to manage the market in a strategic and systematic way.

In spite of these meaningful results, we admit that the present study has some limitations. First, the samples, the survey region and the way of sampling are far from satisfactory. The survey has to be conducted with those who have actual purchasing power. But, the region is confined to Seoul and Chonan. The representativeness of the sample might be questionable and, thus, it is not easy to generalize the results we find. Second, it might be pointed out that we only employ some important factors only and that we completely depend on the subjects' response as to their experiences of impulsive buying.

We propose that further research in this area should take the following into consideration. Above all, the pool of samples should be expanded. And the research should use the inside information of a company and involve its customers who are considered impulsive buyers. Moreover, a more accurate application of research methods is also essential. For example, one could classify and control the stimuli factors and use an experiment to figure out their influencing power. If possible, it might be worthwhile to investigate customers' behavior after impulsive buying. A more practical study is in order with a variety of approaches to TV home shoppers' behavior in order to materialize marketing stimuli and manage them in an effective way.

Reference

http://www.jed.co.kr
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