

A.I.D. Technical Report No. 7

Can Export Services Assistance
Make a Difference?
The Korean Experience
(Document Order No. PN-AAX-264)

by

Michael T. Rock
Institute for International Research

Agency for International Development
Center for Development Information and Evaluation

April 1993

The views and interpretations expressed in this report are those of the authors and are not necessarily those of the Agency for International Development.

TABLE OF CONTENTS

Foreword
Summary
Glossary

1. Introduction
2. The Political and Economic Context
3. The Market for Export Services
4. Export Services: Use and Impact
5. Implications for Donors

Bibliography
Persons Interviewed
Endnotes

FOREWORD

Recent economic literature strongly suggests that outward-oriented economies with sound trade, investment, and export systems have achieved better development results than have inward-oriented economies. The Agency for International Development (A.I.D.) has devoted substantial resources to

supporting outward-oriented growth through projects focused on export and investment promotion. Two key questions face donors: Is export and investment promotion assistance worthwhile? Does it merit continued A.I.D. support?

The Center for Development Information and Evaluation (CDIE) has conducted a worldwide assessment of A.I.D.'s experience with export and investment promotion services to evaluate the contribution of intermediaries providing services to exporters in developing countries. Such services include those provided directly to exporters or investors: information (e.g., foreign markets), contact-making (e.g., with buyers), deal-making, technical assistance, and government facilitation. Issues analyzed include the rationale for donor intervention; the impact on exports, jobs, and the market for support services; the return on A.I.D.'s investment; service strategies; and effective service providers. This analysis has been based on surveys of exporters in seven countries, extensive interviews with service providers, and other sources.

The CDIE assessment focused initially on export and investment promotion projects in the Latin America and the Caribbean (LAC) region. A desk review examining 15 projects resulted in a report, *Promoting Trade and Investment in Constrained Environments: A.I.D. Experience in Latin America and the Caribbean*, A.I.D. Evaluation Special Study No. 69. CDIE followed this study with field visits to Guatemala, the Dominican Republic, Costa Rica, and Chile, culminating in a synthesis report, *Export and Investment Promotion: Sustainability and Effective Service Delivery*, A.I.D. Program and Operations Assessment Report No. 2. In 1991, CDIE initiated fieldwork in Asia, examining programs in India, Indonesia, Korea, and Thailand. This report is one of four country studies produced for the Asia phase of the assessment. To complement these country studies, CDIE completed two cross-cutting technical reports, "Service Use and Impact: Evidence From Survey of Exporters in Asia," and "Measuring the Costs and Benefits of Export Promotion Projects." In addition, CDIE carried out a desk review of similar projects in the Near East Region resulting in the report, "A Review of A.I.D. Experience: Export and Investment Promotion in Egypt and Morocco." The forthcoming program assessment report, "Export and Investment Promotion Services: Do They Make A Difference?" will draw on each of these technical reports in presenting key findings, conclusions, and management implications of this assessment.

SUMMARY

The benefits of an outward-oriented trade strategy have been convincingly demonstrated, but it remains less clear whether export success depends only on getting incentives right or whether production and marketing assistance to nascent exporters of manufactures is also important. To clarify the impact of publicly provided export services on export

performance, this report offers a detailed case study of the Republic of Korea's public sector export services program during Korea's early export expansion period (1961 to 1973). Korea was chosen for study because, first, its export services assistance, in tandem with a lucrative export incentive system, provided an ideal opportunity for considering these issues; and second, the Agency for International Development (A.I.D.) provided substantial assistance to the Government of Korea in support of its export services program during this period.

Although the Korean Government experimented with several export promotion approaches during the late 1950s and early 1960s, key aspects of Korea's comprehensive export system were not in place until 1965. At that point, the Government began to maintain macroeconomic stability and a competitive exchange rate; set quantitative export targets by firm, industry, and geographic market; and monitored performance relative to targets, rewarding firms that met or exceeded targets with heavily subsidized credit.

At the same time, the Government created a high-level Export Development Committee (EDC) to provide production and marketing assistance to exporters. Recognizing, however, that production and marketing are highly specialized, the Government created a large number of joint public-private commodity-specific task forces to resolve these problems. It also created two public sector, industrywide institutions that set industrial standards, promoted quality control, and inspected and tested the quality of Korea's exports. The Korea Trade Promotion Agency (KOTRA), a public sector agency, was created in 1962 to market Korean exports. KOTRA carried out market research, engaged in a public relations program, and searched for buyers. Because the Government feared private sector dependence on imported technology, it created the Korean Institute of Science and Technology (KIST) in 1966. KIST was responsible for developing an indigenous capacity to generate new industrial technologies. A.I.D. provided assistance directly to a number of these public sector institutions and supplemented this support with highly targeted production assistance to firms and industries.

How successful were these public sector agencies in fulfilling their mandates? Interviews of exporters from the 1970s, along with more recent interviews of exporters and former Government officials involved in the early stages of export expansion, suggest that the Government's public sector export services institutions had minimal impact on export expansion. It appears that lucrative export incentives and a substantial entrepreneurial history facilitated mutual searches between Korean exporters and aggressive foreign importers, buyers, and machinery suppliers. As a result, foreign sources provided most of the production and marketing assistance used by exporters.

What can donors learn from this experience?

First, donors need to carefully identify the rationale for intervening in export service markets. The statist orientation of Korea's export promotion program and public sector distrust of the private sector led the Government and A.I.D. to assume that intervention in export services markets was warranted. This was a mistaken assumption. Government and A.I.D. officials underestimated the experience of Koreans in industry and exporting during the period of Japanese colonialism. They incorrectly assumed a limited capacity by Koreans to respond to shifts in the incentive structure, and underestimated the technical, managerial, and foreign trade skills of Korean entrepreneurs. The history of substantial technical assistance from Japanese, German, British, and Australian firms, from post-independence to pre-1960, was ignored. The role of Japanese trading companies and importers/buyers in export marketing was also underestimated. In short, there was no significant market failure in export services markets.

Second, it may be difficult to make public sector provision of export services effective. A.I.D.'s massive macroeconomic policy reform assistance was important in laying the foundation for export-led growth. In addition, Korea's lucrative export incentives provided the ideal opportunity to test the effectiveness of a strategy of public sector provision of export services. If those services had helped firms overcome marketing and production problems, it would have been demonstrated that publicly provided services, offered in tandem with the right incentive structure, could propel export growth. However, because the public sector export services appear to have made only a marginal contribution to Korean export growth, the effectiveness of such services in other countries may be open to question.

Third, export services provided by the international private sector made a difference. Korea's exporters used production and marketing assistance. Until they established their own overseas offices or used domestic trading companies, Korean exporters relied heavily on Japanese trading companies and machinery suppliers for production technology. Given the extensive production and marketing contacts that developed between Korean exporters and foreign export services providers, it is likely that those services had a significant impact on export expansion. This suggests that public sector production and marketing assistance might be most effective in helping exporters develop long-term collaborative relationships with importers/buyers and foreign machinery suppliers of developed countries.

Finally, public sector institutions should not be created to provide export services, even if there is a rationale for subsidizing export services support. Each of Korea's public sector export services institutions has experienced significant sustainability problems, including loss of initial mission, sagging morale, and difficulty finding a new mission. Limited and time-bound public support for private sector exporters could have occurred without creating and subsidizing several

ineffective public sector institutions that continued indefinitely. Because it is often difficult to reform or close existing government institutions, the decision to adopt a strategy to provide public sector export services should not be taken lightly.

GLOSSARY

- A.I.D. - Agency for International Development
- ECC - Korean/American Economic Cooperation Council
- EDC - Economic Development Committee
- EPB - Economic Planning Board
- EPSC - Export Promotion Subcommittee of the EPB
- FCIA - Foreign Capital Inducement Act of 1961
- IA - Industrial Advancement Administration
- KAIS - Korean Advanced Institute of Science
- KAIST - Korean Advanced Institute of Science and Technology
- KIST - Korean Institute of Science and Technology
- KOTRA - Korean Trade Promotion Agency
- KS - Korean Standards
- KTA - Korean Traders Association
- NIRI - National Industrial Research Institute
- WTF - Working Task Forces

1. INTRODUCTION

The purpose of this report is to examine the role of export services assistance to Korean manufacturers in the early stages (1961 to 1973) of Korea's export drive. Because this assistance was deeply intertwined with the A.I.D. assistance program, its examination must consider the role of A.I.D. This report will determine where export services assistance fit in the Korean Government's and A.I.D.'s overall export strategy, how services were delivered, and whether export services had a positive impact on exports.

It is not yet clear whether Korea's export success was

simply the result of getting incentives right or whether production and marketing assistance to nascent exporters of manufactures mattered. Because Korea's outward-oriented policies followed a period of import-substitution industrialization, exporters had to organize for many new and unfamiliar tasks simultaneously when the policy framework shifted. If market failure kept the private sector from responding to those problems, publicly provided or supported export services might have been necessary to assist new exporters with the marketing and production challenges called for by the shift in incentives.

Although the Government's export services assistance may have compensated for market failure, little is known about it. Evidence suggests that public sector export services assistance, especially that provided by trade promotion organizations, has not been effective. But this does not mean that export services has had no effect. A.I.D.'s experience in Latin America suggests that export services, provided by highly specialized private sector institutions, can make a difference. Moreover, several studies have shown that multinational corporations, multinational buying groups, and importers/wholesalers assisted export manufacturers in East Asia under international subcontracting arrangements. Importers and buyers also provided design, styling, and technical specifications, and they monitored quality control.

If indigenous entrepreneurs or the international private sector provided these services during the early stages of Korea's export expansion, there may have been little need for public sector support or provision of production and marketing assistance to nascent exporters. But because little is known about the relative importance and effectiveness of these different service providers, this examination of the Korean Government's export services program must consider the roles of indigenous entrepreneurs and the international private sector in export services markets.

The analysis proceeds in four parts. Section 2 outlines the political and economic context of the Korean Government's export services support to exporters of manufactures, and U.S. assistance in this regard. Section 3 examines the market for export services, reviewing evidence on the capacity of Korean entrepreneurs and the foreign private sector to meet the export services needs of manufacturing exporters. Section 4 reviews evidence on the sources of export services used by Korean exporters of manufactures, and Section 5 draws implications from Korea's experience for donor support in export services markets.

2. THE POLITICAL AND ECONOMIC CONTEXT

Korea's modern industrial and trade policy history can be roughly divided into four phases: (1) an import-substitution phase prior to 1961; (2) a take-off phase that began in 1961 and

lasted through 1973; (3) a heavy chemical industry drive that occurred between 1973 and 1979; and (4) a post-1979 liberalization phase. Figures 1 and 2 provide an overview of Korea's export performance during this period. Policy during Phase 2, or the take-off phase, is notable for macroeconomic stabilization, devaluation, and a unique administrative system of promoting exports within the context of limited trade liberalization and classical import protection. Starting in 1973, general export promotion gave way to a sectoral development strategy that focused on heavy and chemical industries. The major policy innovation during Phase 3 was the administrative system's shift from favoring all exporters to promoting heavy and chemical industries. Import protection, fiscal preferences, and the allocation of credit were all used to build world-class industries in automobiles, consumer electronics, shipbuilding, and steel. Following structural and macroeconomic imbalances created by the second oil price shock, the first post-Park Government embarked on a neoclassical-style liberalization program. The exchange rate was devalued; the selective allocation of credit to heavy and chemical industries was slowed and then stopped; credit subsidies were reduced; and the trade regime was liberalized by relaxing import controls and reducing tariffs.

Since the need for export services would likely have been greatest during the Phase 2 (1961 to 1973), the discussion that follows focuses on that period. Although this should permit illumination of the role of export services assistance during the early stage of export expansion, subsequent shifts in the policy framework that occurred should demonstrate that (1) strategies put in place are rarely permanent and (2) what may have made good sense for one period may not make sense for another.

The turning point in the take-off phase of South Korea's export-led industrialization program began with public outrage over the illicit accumulation of wealth, which swept the Rhee Government from office in 1961. The military's seizure of power was accompanied by a ban on political parties, restrictions on the press, and a disbanding of unions. During the ensuing campaign against illicit wealth accumulation, the Government increased its tax on the private sector and nationalized the banking system, which led to unprecedented control over the allocation of credit. The crisis and resulting consolidation of political power gave President Park a unique opportunity to reform the bureaucracy and alter the relationship between government and business.

President Park began administrative and economic reforms that transformed the Korean economy. Administratively, the president's office created two economic secretariats, and an Economic Planning Board (EPB) of reformist technocrats. The creation of the two secretariats signaled the president's intention to take economic matters seriously, and the creation of the EPB fostered the emergence of a powerful institution. The EPB was given responsibility

for planning, budgeting, investment appraisal, price policies, and the gathering and dissemination of statistics. The EPB chairman was made deputy prime minister, a status that afforded him substantial authority over other ministries. This development, combined with President Park's unwavering commitment to rapid economic development, set the stage for Korea's highly statist transition to export-led industrialization.

But the centralization of decision-making authority did not constitute a coherent strategy. Strategy formulation required pressure from A.I.D. During the early transition stage A.I.D. was concerned with macroeconomic stabilization and stagnating exports. Because U.S. assistance to Korea was so massive, the A.I.D. Mission was able to exert substantial influence on Korean policymakers concerning these issues. When A.I.D. threatened to suspend aid disbursements over macroeconomic policy disagreements, the Government negotiated a stabilization program. There were major devaluations in 1961 and 1964. Because domestic inflation eroded the impact of these nominal devaluations, in 1964 the Government inaugurated a sliding peg exchange rate system. In addition, the Government experimented with several selective export promotion devices. A highly discretionary system of multiple exchange rates, direct cash payments, and permission to retain foreign exchange earnings were gradually replaced by more automatic and significant concessions, including subsidized loans, tax reductions on income from exports, exemption of exports and intermediate inputs used in exports from indirect taxes, accelerated depreciation for export investment, and a wastage allowance system which allowed exporters to import preferentially more intermediate inputs than needed for their exports.

By early 1965 the key aspects of Korea's Phase 2 (1961 to 1973) export administration were in place. The Government began maintaining macroeconomic stability and a competitive exchange rate. It also began setting quantitative export targets by firm, industry, and geographic market and monitored performance relative to targets, rewarding those who met or exceeded targets with heavily subsidized credit. This multifaceted export administration was harnessed to a mobilized public/private sector effort that focused on results. Interestingly enough, this phase did not involve significant liberalization of imports. Prior to 1967, most commodities could not be imported into Korea (except for direct or indirect export), unless those imports could be shown not to compete with local products.

Along with these developments, the joint Korean/American Economic Cooperation Council (ECC) created the Export Promotion Subcommittee (EPSC) of ECC to deal with production, administrative, and marketing problems facing exporters. Both the Government of Korea and A.I.D. representatives on EPSC assumed that Korea's potential for industrial and export development was severely constrained by problems in these areas. The Government believed that it

would have to prime the pump if exporters were to succeed. Despite Korean and American differences over how much to lend to the private sector, both sides recognized that production assistance was highly specialized, which called for a commodity-by-commodity assistance strategy. This led the Government to create a number of joint public, private sector, commodity-specific working task forces (WTFs) to resolve production problems in specific firms and industries. A.I.D. financed numerous, highly targeted consultants to work with individual firms and industries. This assistance went to producers of human hair wigs, ceramics, silk cloth, furniture, canned goods, antiques, men's garments, footwear, paper, cement, shrimp, and embroidered handkerchiefs.

This highly targeted production assistance to particular firms and industries was complemented by a Korean-American effort to address industrywide technology, marketing, and quality control problems. A.I.D. supported new public sector institutions to develop and transfer technology, such as the Korean Institute of Science and Technology (KIST), and to improve the quality of Korean exports, the National Industrial Research Institute (NIRI). It also strengthened the new public sector export marketing institution, the Korean Trade Promotion Association (KOTRA).

KIST was a product of the Government's perception of the private sector's weak capacity in applied industrial research and high dependence on imported technology. KIST was charged with developing an indigenous capacity to generate new industrial technologies that could meet the needs of private industry. It also assisted the Government in regulating technology imports. To ensure that KIST focused on the needs of industry, its research agenda was tied to contract research for private industry.

The creation of a public sector source of assistance in applied industrial technology across all industries, considered important to Korea's development, was recognized to be a massive task. Since the Korean scientific community did not have the capacity to organize and manage such an effort, the Korean Government and A.I.D. turned to the Battelle Memorial Institute for assistance. Battelle helped KIST develop links to the international science community, recruit trained senior staff, plan physical facilities, and identify research projects. Once established, KIST systematically surveyed the industrial sector's need for new technology and then carried out numerous research projects.

KOTRA was established in 1962 to provide industrywide export marketing. KOTRA was responsible for conducting market research (e.g., identifying Korea's competitors and the price and quality of their goods), exploring foreign demand for Korean goods, promoting Korean exports through public relations, and finding buyers. KOTRA also provided information for Korea's young export manufacturers, monitored buyer response to Korean products, and collected

copies of world-famous brand goods for display to Korean manufacturers. Because the Government believed in the importance of export marketing, the president of KOTRA participated regularly in the President's Monthly Export Promotion Meetings.

A.I.D. provided a range of assistance to KOTRA, including a survey and assessment of KOTRA, and in the development of KOTRA's "school for exports." A.I.D. also arranged for the president of KOTRA to visit the heads of large U.S. buying chains in the United States. This trip was followed by a visit to Korea by 10 heads of the largest U.S. retail buying chains.

Quality control issues were addressed through the Industrial Standardization Act of 1961, which established the Industrial Advancement Administration (IA) under the Ministry of Commerce and Industry. IA created industrial standards (the KS, or Korea Standards, mark), promoted quality control in industrial production, and was responsible for inspecting and testing the quality of Korean exports. Although IA's mandate extended well beyond exports, the Government was convinced by Japan's reputation as a low-quality exporter to make a concerted effort to ensure the quality of exports. As a result, IA created a special public sector institute, the National Industrial Research Institute (NIRI), to carry out export inspections and testing.

A.I.D. supported NIRI by providing two full-time specialists and numerous short-term experts. It used technical assistance to provide advice on specifications for laboratory equipment and buildings and to set up training programs for quality control technicians. A.I.D. financed a review of Korea's quality inspection system for exports. It brought in a full-time quality control adviser to assist in establishing a quality control association and organized several trips abroad so that Korean technicians could study quality control methods used in Hong Kong, Japan, and Taiwan. A.I.D. support was also used to establish private sector inspection laboratories in the Industrial Area Program centers in Taegu and Pusan.

At A.I.D.'s urging, NIRI built, equipped, and trained individuals for six nongovernmental inspection and testing institutes. Initially, these institutes were responsible for inspecting all exports. They charged fees for their services, and they were apparently self-supporting. These quasi-public inspection and testing institutes were complemented by several private sector inspection and testing organizations. NIRI also trained inspectors for private inspection agencies.

As the previous discussion makes clear, the Korean Government's export services assistance was an integral part of a wide ranging state-led export promotion program, which included restructuring economic and export bureaucracies. These bureaucracies maintained macroeconomic stability and a

competitive exchange rate. They set quantitative export targets by firm, industry, and geographic market. They monitored performance relative to targets and rewarded firm and industry level export performance. This multifaceted export administration focused on results. The statist orientation of export promotion, distrust of the private sector, and misunderstanding of its capabilities led the Government to rely on a public sector services provision assistance strategy. Although A.I.D.'s technical assistance advisers were occasionally able to nudge services provision in a private sector direction, little thought was given to the role that either indigenous entrepreneurs or the international private sector might play in export services provision. As discussed in Section 5, this limited the effectiveness of the Government's export services assistance.

3. THE MARKET FOR EXPORT SERVICES

Although Korea's public sector assistance in export services was targeted to correct market failures in export services markets, there was already significant indigenous marketing and production capacity in particular private sector industries. That capacity reflected a substantial entrepreneurial history and significant production and marketing contacts between Korean entrepreneurs and private sector firms in several developed countries, most notably Japan. This indigenous entrepreneurial capacity and contacts with foreign private sector firms suggest that domestic and international private sector actors may have played an important role in "filling the gaps" in the export services market. For this reason, it is important to provide some assessment of Korea's indigenous entrepreneurial capacity and the relationship between Korean entrepreneurs and foreign private sector actors.

For centuries Koreans lived in extreme international isolation, which ended abruptly when the Hermit Kingdom was forced to open its ports in 1876. By 1910, the previous centuries' isolation had been replaced by substantial exposure to modern industry. In that year approximately 10 percent of the labor force worked in manufacturing and exports, which, although virtually nonexistent prior to the opening, already constituted nearly 20 percent of the domestic commodity product.

During the Japanese occupation from 1910 to 1945, Korea grew fast and industrialized further. Between 1910 and 1945, manufacturing net commodity product grew at an annual compound growth rate of 10 percent, and net commodity product tripled. As a result, exports reached 30 percent of national income. Although exports were concentrated in primary commodities, especially rice, textiles made up more than 10 percent of exports, while pulp, paper, pig iron, sugar, flour, leather, cement, and ammonium sulfate added another 3 to 6 percent of exports.

Korean industrial activity between 1910 and 1945 was particularly noteworthy in textiles, an industry that came to dominate exports during the first decade of the post-1960 export expansion. Although Japanese firms were dominant, by 1938 Korean-owned firms held 24 percent (10.2 million yen) of the capital invested in large-scale textile firms. This period also gave birth to a small indigenous financial, commercial, and industrial elite that evolved into some of Korea's post-1960 chaebol (industrial conglomerates), which came to dominate the Korean economy. Two cases that follow, those of Kim Yon-su and Pyong-ch'ol Yi, typify this pattern.

The Kim family's wealth dates to extensive agricultural holdings from the mid-19th century. Kim Yon-su, a grandson of Kim Yo-hyop, completed his secondary and college education in Japan and graduated from Kyoto Imperial University in 1921. He served as managing director and president of Kyongsong Spinning and Weaving Company, the largest indigenously owned and managed industrial enterprise of the colonial period. With offices in Osaka, Kyongsong had an export orientation and was extremely active in Manchuria.

Kim also organized, managed, and owned Samyang, a large indigenous agricultural cooperative and served as the chief executive officer of the Haedong Bank. Other Kim holdings included Chung'ang Commerce and Industry, which was devoted to marketing and rubber production; three limited liability joint stock firms, including South Manchurian Spinning; Tonggwang Raw Silk Company; and investments in many Japanese enterprises, including a trading company (Chosen Tao Trade), a leading utility (Kanko Hydroelectric), and a railway company (Keishun Railway Company). In all, Kim held directorships in more than 20 companies with paid in capital in excess of 100 million yen. Other families had similarly large holdings in commerce and finance.

Pyong-ch'ol Yi, the founder of Samsung and the youngest son of a wealthy landlord, was born in 1910. After middle school, he enrolled in the Political Science-Economics Division at Waseda University in Japan. He started in business in 1936, when he established a rice mill with funds inherited from his parents. By 1945 he had expanded into trucking, real estate, domestic trading, milling, noodle-making, and brewing.

As the Korean incentive structure shifted, he responded by expanding into trading activities (after Liberation in 1945), import substitution industrialization (during the 1950s), and the export of manufactures (after 1961). Following Liberation, he saw a lucrative market in international trade. He established the Samsung Muslan Company in Seoul in 1948, and by 1950 his trading company's sales put him in the nation's top 10.

With his substantial trading profits, Pyong-ch'ol established several import substitution activities, including Cheil Sugar Company in 1953 and Cheil Wool Textile, Ltd. in 1954. Cheil Wool purchased modern equipment from a West German

firm and hired West German engineers to assemble the machinery and supervise start up. Cheil Wool also sent five engineers to West Germany, England, and Australia for training. In the early 1960s, Cheil Wool was able to expand its spinning capacity by 50 percent without resorting to foreign technical assistance. It also began to produce "top making" wool with additional West German technical assistance. By 1969, the company became the first Korean textile firm to win an "invention award" from the Government.

In addition to producing several of Korea's post-1960 chaebol leaders, the period from 1910 to 1945 saw the emergence of smaller independent presidents/founders who became active exporters in the 1960s. One such textile firm, founded in 1935, was sold after World War II by the Government to the Korean who managed it for the Japanese. This firm's continuous management history spans roughly 50 years. When export demand shifted to synthetics in the early 1960s, the firm developed polyester cotton blends. It was able to do this with Government subsidies and minimal technical assistance from a Japanese synthetic fiber manufacturer. In 1963, the company received the President's award for its contribution to poly/cotton blended fabrics. Between 1963 and 1971, the company's spindle/loom capacity was expanded six times. In all but one expansion episode, the company relied on British and Japanese engineering assistance.

Although this historical sketch is not definitive, it does suggest considerable entrepreneurial skill and experience. Japanese language skills, education in Japanese universities and factories, and technical assistance from a broad array of machinery suppliers in Europe and Asia prior to 1960 portray a degree of technical competence and cosmopolitan outlook that bespeaks of an indigenous capacity to "fill the gap" in export services.

Since most of Korea's post-1961 industrial expansion resulted from an increase in firm size rather than an increase in the number of firms (or entrepreneurs), it may well be that Korea made excellent use of the entrepreneurial talent that developed between 1910 and 1961 to expand exports. This rather small number of entrepreneurs clearly knew how to export manufactures and were in touch with customer preferences in developed country markets. They were well positioned to exploit the new economic opportunities for manufactured exports to developed country markets without much export services support from the public sector, as the post-1961 incentive system removed the bias against exports. This existing capability probably explains why the supply response of Korea's entrepreneurs to export incentives was so quick and so substantial. It also suggests why the supply response might be lower elsewhere.

4. EXPORT SERVICES: USE AND IMPACT

Additional evidence on the roles played by the Government and the private sector in providing export services to exporters of manufactured goods is available from three interview studies of Korea's entrepreneurs. Each of those studies, conducted in the mid-1970s, was designed to gather data on entrepreneurs' perception of the difficulty of the production and marketing problems they faced; identify the sources used by those entrepreneurs/exporters to acquire new technologies and break into new export markets; and provide limited insight into the role of government in assisting entrepreneurs/exporters to overcome their problems. The author supplemented those surveys with selective in-depth interviews of public and private sector actors involved in the early export expansion. What does this evidence suggest?

How severe did Korean entrepreneurs perceive their production and marketing problems? Entrepreneurs and exporters were asked to indicate the degree of difficulty they faced in (1) perceiving new market opportunities, (2) obtaining technicians and training, and (3) dealing with plant design, technology, and construction. Respondents were asked to rate the difficulty of each task (on a scale ranging from 1 [very difficult] to 5 [simple]). Responses were broken down between those who were exporters and those who produced for the domestic market.

The absolute level of perceived difficulty among all entrepreneurs was quite low. The modal response was generally "simple," while the mean response was between "simple" and "some problem," or between 3 and 5. Responses reflected little difference in perception of level of difficulty between production for export and production for domestic use. Perhaps more surprising, exporters reported greater ease in perception of opportunity and market identification than entrepreneurs who produced for the domestic market.

Where did Korean entrepreneurs turn for assistance when conceiving a new project or market, acquiring new technology, and finding relevant training? Respondents stated that each of these tasks was overwhelmingly filled by the firm's chief executive and/or employees and relatives. Foreign entities were cited as important in conceptualization (12.9 percent of the time); technology acquisition (18.7 percent of the time); and technical training (12.6 percent of the time). Government was cited as important for financing (22.5 percent of the time) and conceptualization (6.5 percent of the time). Government played a minimal role in technology acquisition (0.8 percent of the time) and technical training (0 percent of the time).

Surprisingly, this distribution of entrepreneurial functions was roughly similar before and after 1968. Even though the Government share in conceptualization of new opportunities/markets was almost four times larger before 1968 than after 1968, Government assisted in project conceptualization only about a quarter of the time. Furthermore, a breakdown between exporters and nonexporters

showed that foreign entities played a more important role than Government.

How did Korean firms market their exports? Marketing channels in the mid-1970s included the Korean Traders Association (KTA); more than 30 exporters' associations, such as the Korean Knitted Goods Exporters Association and the Korea Footwear Exporters Association; Japanese and Korean trading companies; importer/buyers; wholesalers/manufacturers in developed countries; government assistance through KOTRA; and an exporting firm's own overseas branch.

What was the relative importance of these marketing channels and how did they change over time? Unfortunately, there is no direct evidence on the relative importance of different marketing channels during the early stages of export expansion. As early as 1969, Amicus Most, an A.I.D. technical adviser, stated that exporters were relying on large buyers in developed countries, Japanese and Korean trading companies, the KTA, the Korean Chamber of Commerce, KOTRA, and overseas branch offices of large Korean manufacturers. But there was no mention of the relative importance of each channel.

Data from one of the interview studies of exporters ranked the importance of marketing channels in the following order: importers (38.9 percent), wholesalers (14.6 percent), manufacturers (14.3 percent), exporting firm's own branch (11.3 percent), Japanese trading company (9 percent), retail chain/department store (4.1 percent), and Korean trading company (3.7 percent). When exporters were asked how first contact with buyers in new export markets were made, the most frequent responses were through foreign-buyers (40 percent of the time) and visits to a foreign country (20 percent of the time). Among the least frequent sources for initial contact were trade fairs and enquiries directed through KOTRA.

These findings are consistent with the author's in-depth interviews of selected public and private sector individuals who had been actively involved in the early export drive. Exporting through Japanese trading companies appears to have been significant in the early days, but those companies tightly limited Korean access to ultimate buyers and may have charged high margins. Korean firms used a variety of strategies to expand their channels to foreign markets. Industries, such as spinning and weaving, started their own export marketing organizations financed by levies on producers. Others were able to track down their ultimate buyers to deal with them directly, or aggressively recruited large U.S. retail buyers. Some relied on letters of introduction, others used "Jewish ragmen" from New York and the Middle East and Indian merchants, and others relied on overseas buyers who located in Korea for marketing and pre-shipment inspections. Over time as exports expanded, the chaebols established their own overseas offices. Ultimately, the Korean Government helped establish

Korean trading companies, which have come to dominate the marketing of Korean exports.

While some Korean industries relied on KOTRA's activities and overseas offices to find buyers, several reasons suggest that this approach was not important. The complexity of styling and design issues for ready-made garments, for instance, was beyond KOTRA's capabilities. Also, KOTRA had a limited understanding of the complexity of marketing channels. As a result, neither buyers nor sellers of ready made garments used KOTRA to find each other. Moreover, the experience of Japanese trading companies was of enormous advantage. Japanese trading companies tended to know buyers' reputations, could easily get letters of credit, and were used to settling quality complaints. KOTRA's role of finding buyers was also limited by the fact that plenty of buyers, especially big buyers, came to Korea on their own.

This does not mean that KOTRA played no role in early export expansion. Virtually everyone interviewed for this report stated that KOTRA's overseas offices were havens for Korean manufacturing visitors in the early days. KOTRA's offices provided a "home abroad." They occasionally arranged contacts, provided access to cheaper international telephones and telexes, and appears to have played an important research role.

Where did Korean firms get production assistance and technology for modernization? Because direct foreign investment was relatively small in Korea, multinational corporations did not fill the technology gap. The contribution of technical assistance and licensing appears to be similarly small. The cumulative value of technical assistance between 1962 and 1976 was less than \$245 million, whereas the comparable figure for royalty payments to commercial sources for licensed technology was less than \$115 million.

If Korean entrepreneurs did not acquire most of their technology from direct foreign investment, technical assistance, or licensing, where did they get it? Did government research institutes such as KIST play an important role? Korea relied heavily on foreign loans to finance the import of foreign capital goods embodying new technology. This was complemented by substantial local know-how, especially in basic process technology. A survey of 112 exporting firms identified a rank ordering of important sources of basic process technology and product innovation technology. In the rank ordering, 29.4 percent responded that local know-how and experience acquired by personnel through previous domestic employment was important, followed by 19.7 percent for foreign suppliers/buyers, 16 percent for foreign licensing and technical assistance, and 13.2 percent for experience acquired by personnel through previous overseas employment. Government institutions were cited as important sources less than 10 percent of the time. For foreign and domestic sources taken jointly, suppliers/buyers were the most frequently cited sources (28.5 percent) followed by the transfer of labor among firms (23.7

percent).

For product innovation technology (that is, for improvements in product quality, changes in product design, styling, and technical specifications) 68 percent cited that foreign sources were important. Of foreign sources, buyers were cited most frequently (26.2 percent), followed by overseas travel by staff (19.9 percent). Foreign buyers contributed to product innovation through periodic visits to production facilities, ongoing programs to improve quality, and by setting design, styling, packaging, and technical specifications.

Our interviews and review of existing studies of and by KIST confirm that its technology development/transfer role was limited, especially in the early years of export expansion. KIST was not established until after the export expansion was well under way, and its research effort mainly focused on import substitution industrialization. Few of KIST's technology development or technology transfer projects were successfully commercialized. More important, Korean firms relied heavily on the Japanese private sector for technology assistance. Virtually every exporter interviewed for this report stated receiving production assistance from the Japanese. Reliance on the Japanese for technology is widely known in Korea. The continued dependence on exports that use foreign buyer specifications in a significant number of export industries suggests that neither KIST nor the private sector has been able to free Korea from substantial reliance on imported technology.

A closer examination of Korea's technology acquisition policies supports this interpretation. Reliance on local know-how and previous employment experience are partly related to the past, as in the case of basic production technology for nonsynthetic textile yarn and plywood. When queried about the sources of technology, exporters in these industries overwhelmingly indicated local sources, which is not particularly surprising since several of the leading textile exporters got their initial experience during the colonial period. This also appears to be the case for plywood manufacturers. The first plywood plant was established in 1935. Subsequently, the industry benefited from the U.S. military's procurement programs of the 1950s.

But some of Korea's technology acquisition appears to be related to the country's heavy investment in human capital and high-labor mobility among firms. There are several distinctive features of Korea's educational and occupational structure that contributed to extensive local know-how in at least basic production technology. When combined with the high degree of labor mobility among firms, Korean firms seemed to have possessed a substantial capacity to master basic process technology at an early stage in the export expansion.

The Korean Government complemented this rich entrepreneurial heritage and substantial investment in human

capital with the 1961 Foreign Capital Inducement Act (FCIA), which controlled the inflow of foreign loans, direct foreign investment, and foreign technology. Under FCIA, all foreign investment proposals were required to specify the level and source of investment, the specific technology transferred, the methods of training and promotion of local personnel, the projected levels of output, the ratio of exports to output, and the ratio of domestic to foreign equity.

Projects for which domestic technical knowledge was considered adequate were closed to foreign penetration, while those for which foreign technical assistance was sought were left open. All foreign investors entering Korea were either required or encouraged to enter into a joint venture with a Korean firm. Under these joint-venture agreements, the foreign partner was required to train the Korean partner's personnel. As a matter of practice, Korean firms in joint ventures frequently transferred those trained to other subsidiaries while rotating new personnel for training by the foreign partner. After Korean personnel learned the basic technology, the Government closed the sector to additional foreign investment.

This particular combination of technology acquisition and assimilation involved falling back on basic production technology in labor intensive activities, such as textiles acquired before 1961; heavy investment in technical post-secondary education and high-labor mobility among firms; reliance on foreign suppliers/buyers for industry/commodity-specific product innovation technologies; and rigorous government control over the acquisition and diffusion of technology associated with foreign capital inflows. This approach appears to have been a powerful mixture that propelled Korean industrialization and exports after 1961. While it may be that government institutions such as KIST played some role in the acquisition and diffusion of technology, little evidence supports this. Moreover, it would appear that the work of KIST as an export services institution was less significant in filling the technology gap than that of Korea's educational institutions, Korean firms, and the Foreign Capital Deliberation Committee.

How important was the Government's export testing and inspection system? Information on the Korean Government's export testing and inspection system is based on interviews of public and private sector individuals who were involved in the early export drive. Several public sector individuals interviewed were convinced that the Government's intervention in export inspection was absolutely essential to Korea's export success, which was also, at least partially, corroborated by several private sector individuals. But there is also evidence that importers/buyers did their own preshipment inspection and testing. At least one large buyer went so far as to duplicate its own inspection and testing system for a prominent Korean chaebol. Moreover, evidence suggests that the export testing and inspection was at times a vehicle for extortion by inspectors.

How should these findings be interpreted? The relatively low level of perceived production and marketing problems, the overwhelming reliance on Korean entrepreneurs and the foreign private sector to solve production and marketing problems, and the low level of attribution given government assistance could be consistent with one of two hypotheses. First, since the interviewees were successful exporters, they may have unwittingly biased responses by overestimating their own roles and crediting government assistance less. Alternatively, the existence of numerous private quality control institutions; the servicing of export markets by Japanese trading companies, importers/buyers, and foreign machinery suppliers; and a substantial pre-1961 manufacturing and manufacturing export-based entrepreneurial history suggest that the indigenous and international private sectors had the capacity to meet the export services' needs of Korea's manufacturing exporters. Although interview bias cannot be ruled out, the preponderance of evidence suggests that Government export services had a minimal impact on export expansion.

5. IMPLICATIONS FOR DONORS

This paper has emphasized that the Government's export services assistance should be viewed in light of (1) the Government's highly statist export drive and (2) the capacity of the indigenous private sector and the international private sector to meet production and marketing needs of manufacturing exporters. Since lucrative export incentives were conditioned on firms meeting export performance targets, the Government's export services support might have been highly effective if it had helped firms overcome marketing or production bottlenecks to meet targets. But this proved not to be the case. The Korean Government and A.I.D. seriously underestimated the capacity of Korean entrepreneurs and their foreign associates to meet the export services needs of exporters of manufactures. Moreover, they chose an inappropriate delivery vehicle (public sector institutions) to implement this support. What then can donors learn from this experience?

Be careful in identifying the rationale for intervention in export services markets. Test that rationale against reality before intervening. The statist orientation of export promotion and distrust of the private sector led the Government to assume market failure in the export services markets. This assumption proved wrong. Both the Government and A.I.D. underestimated the industrial and export experience of Koreans during the period of Japanese colonialism. The capacity of Korean entrepreneurs to respond to shifts in the incentive structure was assumed to be limited, and the technical, managerial, and foreign trade skills of the Korean workforce were considered to be woefully inadequate. The pre-1961 history of substantial technical assistance in production, especially in textiles, from Japan, Germany, Britain, and Australia was all but ignored. The role of Japanese trading companies, and

importer/buyers from Japan and the United States in export marketing was often overlooked. If the Government and A.I.D. had undertaken a serious assessment of the private sector's capacity, including the foreign private sector, to meet the production and marketing needs of new manufacturing exporters before providing public sector export services assistance, one wonders whether they would have invested so heavily in export services assistance or whether their assistance strategy would have focused as much on the public sector.

It may be difficult to make public sector provision of export services effective. Korea's lucrative export incentive system provides an ideal opportunity to test the effectiveness of the strategy of a public sector provision of export services. If the Government's export services support had helped firms overcome marketing or production problems that had kept them from meeting or exceeding targets, the effort would have demonstrated how publicly provided export services offered in tandem with the right incentive structure could propel export growth. But the effort failed because the Government chose an inappropriate services delivery strategy while seriously underestimating the capacity of Korean entrepreneurs and the international private sector to meet the export services needs of exporters of manufactures. It is important to understand why public sector provision did not work in Korea, so that it will be possible to consider conditions under the public sector may be of assistance.

Export services provided by the international private sector do make a difference. Until exporters established their own overseas offices or came to depend on Korean trading companies, they relied heavily on marketing assistance from Japanese trading companies and importers/buyers; some exporters continue to rely on Japanese trading companies. They also relied heavily on foreign machinery suppliers for production innovation assistance. Basic process technology was provided through local know-how, foreign suppliers/buyers, and experience acquired by personnel in overseas employment. Quality control assistance also came from international sources. Each of these services was highly valued by exporters. Given the extensive production and marketing contacts that developed between Korean exporters and a panoply of foreign export services providers, it is difficult to believe that those services did not have a significant impact on export expansion. This suggests that effective production and marketing assistance to nascent exporters should focus on helping exporters develop long-term collaborative relationships with developed-country importers/buyers, manufacturers, and foreign machinery suppliers.

If a need for publicly supported export services is demonstrated, the services should either be supported without creating public sector institutions or those institutions should be subject to sunset provisions. Each of the public sector export services institutions examined have undergone substantial sustainability crises, reflected in loss of initial mission, sagging

morale, and the search for new roles. As the Korean private sector's overseas marketing experience increased, KOTRA was forced to create new roles for itself. During the 1970s, it developed a capacity to research loopholes in protectionist legislation in the West. In the early 1980s, it worked on expanding U.S. exports to Korea by holding a production show for American companies in Seoul. More recently, it has taken an active role in expanding exports of Korean brand-name, higher value-added exports. It has also begun training personnel from other developing country export promotion organizations. In 1989 a new president sought and obtained an independent financial base and new mission. While this seems to have lifted sagging morale, it is not clear that KOTRA has a remaining *raison d'etre*.

Sustainability problems have also confronted KIST, which has had difficulty funding itself through private sector contract research. Through the mid-1970s, 80 percent of KIST's funding came from the private sector. By the mid-1980s, despite the fact that the private sector was funding about 80 percent of all research and development, more than 65 percent of KIST's funding came from Government. The difficulty of creating and sustaining a single public sector applied industrial technology organization to serve all of Korea's industry has also undermined KIST's institutional stability. The widely differing technology needs of Korea's different industries led to the spin-off of 16 separate government research institutes from KIST during the 1970s. These institutes were integrated into nine major institutions in 1981. The reorganization saw the merger of KIST with the Korean Advanced Institute of Science (KAIS) to create the Korean Advanced Institute of Science and Technology (KAIST). But in 1989, KIST was split off from KAIST.

The six private sector export inspection and testing institutes established by the Government have experienced similar fates. Initially all exporters were required to obtain export inspection certificates from one of the six government institutes. But revisions of the Export Inspection Act granted exemptions when (1) a letter of credit or an export contract required that goods be inspected by the buyer or (2) an exporter gained permission from the IA. Moreover, automatic exemptions are provided for all products accorded the KS mark or any foreign industrial standards mark recognized by the IA. As a result, export inspection fees of the testing institutes have fallen and they have been forced to develop other lines of business.

Whereas at least one of the private export inspection and testing institutes appears to have found a productive role, it is not clear that any of the public sector institutions have a *raison d'etre*. If Korea had provided limited and time-bound public support to private sector export services providers, it could have avoided creating and sustaining several ineffective public institutions. Because it is difficult to reform or close an institution after it has been created, the decision to adopt a

strategy of public provision of export services should not be taken lightly.

BIBLIOGRAPHY

- A.I.D. 1992. Export and Investment Promotion: Sustainability and Effective Service Delivery. A.I.D. Program and Operations Assessment Report No. 2. Washington, D.C.: Agency for International Development.
- Amsden, A. 1989. *Asia's Next Giant*. New York: Oxford University Press.
- Beck, N.C. 1966. "Inspection of Export Products in Korea." USAID/KOREA.
- Bello, W., and S. Rosenfeld. 1990. *Dragons in Distress: Asia's Miracle Economies in Crisis*. San Francisco: Institute for Food and Development Policy.
- Brown, G. 1973. *Korean Pricing Policies and Economic Development*. Baltimore: Johns Hopkins University Press.
- Buttari, J. 1991. "Methodological Guidelines for the Analysis of the Export-Support Services Industry." Directorate for Policy/Center for Development Information and Evaluation, Washington, D.C.
- Dornbusch, R., and Y.C. Park. 1987. "Korean Growth Policy." In *Brookings Papers on Economic Activity*, 389-454. Washington, D.C.: Brookings Institution.
- Egan, M.L., and A. Mody. 1992. "Buyer-Seller Links in Export Development." *World Development* 20(3):321-334.
- Haggard, S. 1990. *Pathways from the Periphery*. Ithaca: Cornell University Press.
- Hone, A. 1974. "Multinational Corporations and Multinational Buying Groups: Their Impact on the Growth of Asia's Exports of Manufactures-Myths and Realities." *World Development* 2 (2):145-151.
- Hong, W. 1987. "Export-Oriented Growth and Trade Patterns of Korea." In *Trade and Structural Change in Pacific Asia*, edited by C. Bradford and W. Branson. Chicago: University of Chicago Press.
- Jones, L., and I. Sakong. 1980. *Government, Business, and Entrepreneurship: The Korean Case*. Cambridge, Massachusetts: Harvard University Press.

- Keesing, D. 1988. "The Four Exceptions." UNDP-WB Trade Expansion Program, Occasional Paper No. 2.
- Keesing, D., and A. Singer. N.d. "How Support Services Can Expand Manufactured Exports: New Methods of Assistance." Policy Research Working Paper 544. Washington, D.C.: World Bank.
- KIST. 1972. "Final Report on AID/NASA Pilot Project for Technology Transfer to a Developing Nation: Republic of Korea." Seoul, Korea.
- KOTRA. 1991. "How to Trade With Korea: A Guide to Trade and Investment 1991/92." Seoul, Korea.
- "KOTRA Stresses Need to Develop Own Brand Exports." Korea: Trade and Business, January 1992.
- Krueger, A. 1979. The Developmental Role of the Foreign Sector and Aid. Cambridge, Massachusetts: Harvard University Press.
- Lee, D.H., et al. 1991. "Performance and Adaptive Roles of the Government Supported Research Institute in South Korea." World Development 19 (10):1421-1440.
- Mardon, R. 1990. "The State and the Effective Control of Foreign Capital." World Politics 43 (1):111-138.
- McNamara, D. 1990. The Colonial Origins of Korean Enterprise. New York: Cambridge University Press.
- Most, A. 1969. Expanding Exports: A Case Study of the Korean Experience. USAID/Korea, Office of Private Enterprise.
- Rhee, Y.H., et al. 1984. Korea's Competitive Edge: Managing Entry into World Markets. Baltimore: Johns Hopkins University Press.
- Shinohara, M., et al. 1983. "The Japanese and Korean Experience in Managing Development." World Bank Staff Working Paper No. 574. Washington, D.C.: World Bank.
- Udell, J. 1965. "Report on KOTRA." U.S. Operations Mission/Korea. September.
- Udell, J. 1966. "Report on Men's Apparel Industry." USAID/Korea, Office of Private Enterprise. September.
- USAID/Korea. 1965. "Country Assistance Program: Korea FY 1966." Seoul, Korea.
- USAID/Korea. "Budget Proposal: FY 1961." Seoul, Korea.
- Westphal, L. 1978. "The Republic of Korea's Experience With

Export-Led Industrial Development." World Development 5 (3):347- 374.

Westphal, L., Yung W. Rhee and Garry Pursell. 1981. "Korean Industrial Competence: Where It Came From." World Bank Staff Working Paper No. 469. Washington, D.C.: World Bank.

Westphal, L., L. Kim, and C. Dahlman. 1985. "Reflections on the Republic of Korea's Acquisition of Technological Capability." In International Technology Transfer: Concepts, Measures and Comparisons, edited by N. Rosenberg and C. Frischtak, 170-181. New York: Praeger.

World Bank. 1987. Korea: Managing the Industrial Transition. Vol. 1. Washington, D.C.: World Bank.

Wortzel, L. and H. Wortzel. 1981. "Export Marketing Strategies for NIC and LDC-Based Firms." Columbia Journal of World Business. Vol. 16, No. 1:51-60.

Yamazawa, I and H. Kohama. 1985. "Trading Companies and the Expansion of Foreign Trade: Japan, Korea, and Thailand." In Japan and the Developing Countries, edited by K. Ohkawa and G. Ranis, 436-441. London: Basil Blackwell.

PERSONS INTERVIEWED

Jin Woo Choi, Vice President, Dainong Corporation.

Kim Woo Hyun, Economic Research Institute, KIA Industries.

Wan-Soon Kim, Chairman, Korean Trade Commission, Ministry of Trade and Industry, Republic of Korea.

Chuk Kyo Kim, President, Korea Institute for International Economic Policy.

Dal Hyun Kim, Senior Statistician, Economic and Development Resource Center, Asian Development Bank.

Il Lan Kim, Special Advisor, USAsia, Commercial Development Corporation, former USAID Private Sector Advisor.

Chang Ryul Lee, Director of Project Research, KOTRA, Republic of Korea.

Jong Dae Lee, President, KIA Economic Research Institute.

J.S. Lee, President, Sungmi Textiles Co., Inc.

Sun Ki Lee, Chairman, Korea Techno-Venture Co., Ltd. and

former Vice Minister, Economic Planning Board, Republic of Korea.

Kyung Woo Lee, Manager, Chemicals Inspection and Testing Institute of Korea.

K. P. Moon, Director, Inspection Department, Chemical Inspection and Testing Institute, Korea.

Byoung Tae Park, Director, Standards Planning Division, Bureau of Standards, Industrial Advancement Administration, Ministry of Trade and Industry, Republic of Korea.

Sung Sang Park, former Governor of the Bank of Korea and former President of KIET, Republic of Korea.

Ungsuh Park, President, Samsung Petrochemical Co., Ltd.

Y.H. Rhee, World Bank.

Vera L. Sabin, Assistant to the Vice President, American Chamber of Commerce in Korea.

Cegill Shin, President, The International Division, Samsung Group, Samsung Co., Inc.

Mark Southard, Managing Director, Northern Asia, Sears, Roebuck and Co.

Larry Westphal, Department of Economics, Swarthmore College.

Marvin Winship, Director-Korea, A.C. Monk and Co and former Director Private Enterprise Office, USAID/Korea.