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Credit Policies

Lessons from East Asia

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Directed credit programs should be small, narrowly focused, and of limited duration (with clear sunset provisions). They should be financed by long-term funds to prevent inflation and macroeconomic instability.



Summary findings

Directed credit programs were a major tool of development in the 1960s and 1970s. In the 1980s, their usefulness was reconsidered. Experience in most countries showed that they stimulated capital-intensive projects, that preferential funds were often (mis)used for nonpriority purposes, that a decline in financial discipline led to low repayment rates, and that budget deficits swelled. Moreover, the programs were hard to remove.

But Japan and other East Asian countries have long touted the merits of focused, well-managed directed credit programs, saying they are warranted when there is a significant discrepancy between private and social benefits, when investment risk is too high on certain projects, and when information problems discourage lending to small and medium-size firms. The assumption underlying policy-based assistance and other forms of industrial assistance (such as lower taxes) is that the main constraint on new or expanding enterprises is limited access to credit.

Vittas and Cho give an overview of credit policies in East Asian countries (China, Japan, and the Republic of Korea) as well as India, and summarize what these countries have learned about directed credit programs. Among the lessons:

- Credit programs must be small, narrowly focused, and of limited duration (with clear sunset provisions).
- Subsidies must be low to minimize distortion of incentives as well as the tax on financial intermediation that all such programs entail.

- Credit programs must be financed by long-term funds to prevent inflation and macroeconomic instability. Recourse to central bank credit should be avoided except in the very early stages of development when the central bank's assistance can help jump-start economic growth.

- They should aim at achieving positive externalities (or avoiding negative ones). Any help to declining industries should include plans for their timely phaseout.

- They should promote industrialization and export orientation in a competitive private sector with internationally competitive operations.

- They should be part of a credible vision of economic development that promotes growth with equity and should involve a long-term strategy to develop a sound financial system.

- Policy-based loans should be channeled through well-capitalized, administratively capable financial institutions, professionally managed by autonomous managers.

- They should be based on clear, objective, easily monitorable criteria.

- Programs should aim for a good repayment record and few losses.

- They should be supported by effective mechanisms for communication and consultation between the public and private sectors, including the collection and dissemination of basic market information.

This paper — a product of the Financial Sector Development Department — is part of a larger effort in the department to study the effectiveness of policy-based finance in East Asia. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Priscilla Infante, room G8-118, extension 37642 (36 pages). May 1995.

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CREDIT POLICIES: LESSONS FROM EAST ASIA

Dimitri Vittas and Yoon Je Cho

I. INTRODUCTION

Directed credit programs involving loans on preferential terms and conditions to priority sectors were a major tool of development policy in both developed and developing countries in the 1960s and 1970s. During the 1980s, the realization that most of these programs had resulted in distorted incentives among both lenders and borrowers led to a reconsideration of their rationale and effectiveness. The experience of most countries around the world showed that directed credit programs stimulated capital intensive projects, suffered from abuse and misuse of preferential funds for nonpriority purposes, increased the cost of funds to nonpreferential borrowers, involved a decline in financial discipline that resulted in low repayment rates, and contributed to a swelling of budget deficits. Moreover, once introduced, directed credit programs proved difficult to remove.

This general assessment of the adverse effects of directed credit programs has contrasted with the experience and views of government officials in Japan and other East Asian countries who have long advocated the merits of well managed and focused directed credit programs. According to this view, government involvement in directing credit is warranted when there is a significant discrepancy between private and social benefits, when the investment risk of particular projects is too high, and when information problems discourage lending to small and medium size firms. Use of policy-based lending, in addition to other forms of industrial assistance (e.g. lower taxes, grants, etc), is premised on the argument that the main constraint facing new or expanding enterprises is their limited access to external finance at reasonable terms and conditions. Directed credit programs involving small subsidies overcome this constraint, but to avoid the misuse of funds and abuse of credit programs, a strong emphasis must be placed on the maintenance of macroeconomic stability to minimize distortions in incentives and on effective monitoring to ensure the timely repayment of loans.

This paper provides a brief overview of credit policies in East Asian countries (Japan, Korea and China)¹ as well as India and attempts to pull together some lessons from the experience of these countries. It draws on the findings of a World Bank research project on the "Effectiveness of Credit Policies in East Asian Countries"².

¹ But the paper's main focus is on Japan and Korea.

² The project consists of four parts: this overview paper; two conceptual papers on the case for credit policies and the role of government in overcoming market imperfections; a series of country papers on policy-based lending, financial sector development and industrialization including very detailed studies of policy-based finance in postwar Japan and Korea; and empirical work using a large sample of firm-level data on the effectiveness of credit policies in Japan.

This project is part of the response of the World Bank to the issues raised by Japanese and other East Asian officials regarding the appropriateness of government intervention in stimulating industrialization and economic development³.

It focuses on the role of government in the financial sector and seeks to establish under what conditions can government interventions make a positive contribution to economic growth and development. It also discusses the replicability of East Asian experience in other developing countries. The second section discusses the theoretical underpinnings of policy-based finance and suggests a framework in which this study attempts to investigate the role of government. The third section introduces the main findings of individual country studies (Japan, Korea, China and India), while the fourth section analyzes the similarities and differences in the credit policies among these countries in a comparative perspective. The final section briefly summarizes and concludes the paper.

³ This project is complementary to the "East Asian Miracle" project (World Bank 1993) and, in a less direct way, to the project on the "Main Bank System of Japan", sponsored by the Economic Development Institute. All three projects have received generous support from the Government of Japan and have relied extensively on inputs and contributions from Japanese and other East Asian officials, economists and practitioners. The paper also draws on the 1989 World Development Report on "Financial Systems and Development" (World Bank 1989).

II. THEORETICAL UNDERPINNINGS OF POLICY-BASED LENDING ⁴

In a world of "perfect and costless" information, the role of the financial system is passive: finance is provided to the projects that yield the highest returns. There is little scope for activist involvement by either governments or financial institutions for improving the allocation of credit. In the real world, however, information is highly "imperfect" and costly. The allocation of credit suffers from the existence of informational asymmetries, from the costs of monitoring and verification, and from the costs of contract enforcement. Under these conditions, credit is not necessarily allocated to its best use.

Informational asymmetries give rise to problems of adverse selection, moral hazard, free riding and incentive incompatibility. Asymmetric information problems are further compounded by uncertainty about project returns and by the existence of dynamic externalities. These support a greater involvement of governments and financial institutions in the allocation of credit, although the information problems that inhibit the functioning of markets also constrain the ability of governments and financial institutions to enhance efficiency in the allocation of credit. The information problems that cause markets to be imperfect also cause financial intermediaries (whether privately or publicly owned) and governments to be imperfect.

Economic theory has made considerable progress in recent years in understanding these phenomena and has bridged the wide gap that used to exist between theory and practice. For instance, economic theory stresses the role of market imperfections in explaining the reliance of firms on internally generated funds (retained earnings) as well as on other forms of so-called "inside" finance, i.e. finance provided by owners, managers and banks that have access to information that is not available in the public domain. Such reliance is especially pronounced for young growing firms and for new industrial sectors in developing countries and is clearly a factor constraining their growth. "Inside" finance is less costly than "outside" finance. Increases in available "inside" finance reduce the marginal cost or premium of outside funds.

In the absence of full information, banks tend to allocate credit to firms with available internal funds or with a reliable track record even if they are not the ones with the best investment opportunities. Financial intermediaries, especially (but not only) commercial banks, can play an important role in screening projects, monitoring behavior, verifying outcomes, managing corporate distress and resolving agency problems. By developing and maintaining close long-term relationships with their customers, commercial banks can have superior information to that of outsiders, can support expansion plans, and can also reduce the costs of corporate distress.

⁴ This section draws on Calomiris et al (1992) and Calomiris and Himmelberg (1994a and 1994b), which also contain detailed references to the academic debate on theoretical issues.

These potential advantages of banks depend on the behavior of bankers and the incentives and regulations that govern their operations. In many countries, especially those suffering from substantial gaps in information disclosure on corporate performance, but also even in countries without such major shortcomings such as the United States, the United Kingdom and Scandinavian countries, commercial banks tend to favor lending for low risk activities, such as self-liquidating short-term working capital and trade finance, or for high risk but more speculative projects with short payback periods, such as real estate development. Commercial banks are generally less willing to finance more risky projects with longer payback periods even if they may have higher overall returns. They are also generally reluctant to finance small firms without adequate collateral, even though such firms may be more innovative and may promise higher returns.

A government role in the allocation of credit can be justified on one of two grounds. One justification for the use of credit programs is as a preferred or superior industrial policy instrument for reaping positive externalities⁵. Other forms of industrial policy tools, such as tariffs and subsidies, rely on the marginal incentives faced by firms and may be less effective if firms face binding external finance constraints.

A second possible motivation for credit programs comes from the comparative advantage the government may enjoy in credit supply. Government agencies (often in direct collaboration with private sector industrial associations and research institutes) may have superior information on sectoral prospects than individual private firms and may therefore have an advantage in screening projects. (The so-called cowbell or signalling effect would depend on such superior information, which may also be linked to an implicit or explicit insurance provided by the government.) Governments may further have advantages in monitoring behavior and verifying outcomes, although this would depend on the relative organizational efficiency of government entities vis-a-vis financial intermediaries. Governments are likely to have lower costs of enforcing contracts through taxation and police powers. The government's taxation powers may be very important in internalizing benefits from certain lending policies, which private intermediaries may be unable to capture. This advantage gains in importance if there are technological spillover effects, which neither the firm nor its intermediary can capture but which can be internalized by the government's claims on future taxes.

The presence of these advantages from government involvement in finance depends on the efficiency and motivation of governments. Governments do not always "do the right thing" even if they have some comparative advantage. Government involvement in credit allocation often results in rent seeking, corruption, and crowding out, rather than the pursuit of efficient industrial projects. An important issue in the study of policy-based lending is how can governments prevent rent-seeking behavior from undermining the growth objectives of government policies.

⁵ Externalities used to be dismissed by theoretical economists in the 1970s but in recent years there has been a fundamental re-assessment of their role.

Externalities, information problems and uncertainty are the main justifications used by Japanese and Korean policy makers in support of government intervention in the allocation of credit. The view of the Japanese Overseas Economic Cooperation Fund (OECF) is that subsidized interest rates and directed credit programs may be called for in the following cases (OECF 1991):

- * When the investment risk is too high regarding a particular activity (owing to the need for large scale, long gestation period, high technology and market development);
- * When there is significant discrepancy between private and social benefits (e.g. in the case of rural industries that increase job opportunities in rural areas and prevent over-concentration in urban regions, in the case of industries or parts of industries that may save foreign exchange and thus relieve the balance of payments constraint on other growth industries, or in the case of investment for pollution control and environment protection);
- * When information problems discourage lending to small and medium scale industries; and
- * When infant industries face large social set-up costs.

The OECF view is that the use of subsidized interest rates and credit intervention are not inherently inferior to providing subsidies through the budget.

Government intervention may be justified by the externalities and information problems afflicting credit markets, but the question arises as to how and in what circumstance can these positive aspects of government intervention be fully realized. As already noted, experience with credit policies varies widely among different countries. In Japan and Korea, government intervention in credit markets is deemed to have been effective and beneficial for growth and development. But in the vast majority of developing countries, credit policies have given rise to severe market distortions and have failed to promote growth and development. Most studies of credit policies focus on the size of credit programs, the level of interest rates, and especially the level of subsidies.

But focusing too narrowly on these aspects of credit policies may be misleading. In many cases, government influence over credit allocation could be much stronger even though interest rates are mildly repressed in real terms, and the size of explicitly labeled selective credit programs is relatively small. For example, Japan avoided highly negative real interest rates, and had relatively small (explicitly labeled) directed credit programs compared to many other developing countries during its early period of economic development. Nevertheless, this did not necessarily mean that the role of government in credit allocation in Japan was less significant than that in other countries, where interest rates were more severely repressed due to large fiscal deficits. In Japan, policy-based finance was combined with extensive financial regulation in creating a rigidly segmented financial system that favored lending to

industry and discouraged lending for speculative purposes, real estate development, or consumption (Vittas and Kawaura 1994). Similarly, one may not assess the degree of government intervention in a country over time by simply looking at the level of real interest rates. For example, Korea doubled the level of interest rates, yielding highly positive real rates in 1965, which was often interpreted as financial liberalization. But in fact this strengthened the role of government in credit allocation by shifting funds from the unregulated curb market to the banks which came under stronger control of the government (Cho and Kim 1994).

A very important, yet often neglected, aspect has to do with the "management of credit policies". The performance of firms, although employing the same input mix and producing the same kinds of product, may be widely different depending on the effectiveness of management. Similarly, good and bad governance and good and bad policy implementation can make a lot of difference to the impact of credit and other economic policies. While economists have recognized that there are some merits for government intervention in certain areas, they have often compared these market failures to a simplistic notion of government failure. What needs to be studied is precisely what contributes to "good economic management" and "good policy implementation." Good management, even for an economy, is not always least management or least intervention. It requires effective incentive schemes to motivate the members of the organization, and close monitoring of their performance. Government control over credit may also be understood in the light of governance structures. Credit allocation was used as a powerful instrument for governance control over industrial firms in Korea, and to a lesser extent, in Japan.

The effectiveness of credit policy management, or more broadly effective economic management, would require a supportive institutional environment. The main purpose of credit policy is to overcome market imperfections but to be effective this requires close consultation and coordination between the government and the business sector and a close and effective monitoring and enforcement mechanism. The impact of credit policies often depends on whether an economy has such a supportive institutional environment and well functioning mechanisms for close and effective consultation, coordination and monitoring.

The role of government and the merit of government intervention should also be understood in a dynamic context. In the early stage of development, when many markets are missing, and the existing markets are highly imperfect, and when private sector institutions are poorly developed, the government can play an important role in overcoming some of these problems. But in the later stages of economic development, when the private industrial sector becomes more sophisticated and markets are more robust and better developed, the merits of government intervention diminish significantly.

III. COUNTRY EXPERIENCES: MAIN FINDINGS

A. CREDIT POLICY IN JAPAN ⁶

1. Basic Objectives

Japanese credit and industrial policy has evolved over time in response to the changing needs and structure of the economy. Three phases are usually identified:

- * The reconstruction period between 1945 and 1955 when industrial policy and direct government allocation of funds were very important.
- * The period of high growth between 1955 and 1973 when government policy operated in a less direct fashion, although the financial system was rigidly segmented and subject to wide-ranging controls.
- * The period since the mid-1970s when credit policy has become less interventionist and a slow but steady process of financial liberalization has been under way.

During the high growth era the Japanese financial system had a number of features that, though not unique to it, combined together to give it a character that was quite distinct from that of Anglo-American or continental European financial systems. These features included the preponderant role of indirect finance, the "overloan" position of the large city banks (i.e. their reliance on credits from the Bank of Japan for funding their loans to industrial corporations), the "overborrowing" or high leverage of industrial companies, and the artificially low level of interest rates (Suzuki 1980)⁷. Other distinctive features of the Japanese financial system included the role played by the main bank system, the close relations between banks and industry, the different roles played by debt and equity in the Japanese financial system, and the important financial intermediary role played by large conglomerate groups, especially the general trading companies, in channelling funds to small firms at the periphery of different groups. The financial sector of Japan in the high-growth era was highly segmented. This conferred to the authorities greater control over the allocation of financial resources, although the Japanese authorities did not impose strict directed credit programs on private financial institutions.

The Japanese credit (and industrial) policy seems to have aimed at four different objectives:

⁶ This section draws on JDB/JERI (1994), Vittas and Kawaura (1994), and Vittas and Wang (1991).

⁷ The alleged uniqueness of these characteristics has been challenged by some analysts (Horiuchi 1984, Ikee 1987, and Kuroda and Oritani 1980).

- * To pick and support "winning" industries, especially in areas where Japan could enjoy a dynamic comparative advantage;
- * To phase out "losing" industries, i.e. to help the restructuring and reduction of capacity of those declining industries where Japan was no longer internationally competitive;
- * To support small scale firms; and
- * To provide the necessary industrial infrastructure.

The extensive financial support for some traditional and relatively inefficient industries, such as agriculture, could be seen more as a social policy objective or a response to political pressures and less as a component of an active industrial policy. Government regulation and intervention in the financial sector, through MITI, the Ministry of Finance (MOF), or the Bank of Japan (BOJ), did not focus exclusively on securing cheap finance for the most dynamic sectors, but appeared to aim for a balance between the claims of different sectors.

2. Changing Focus of Industrial Policies and Policy-Based Finance

Industrial policies in postwar Japan have evolved steadily over four decades, from an early emphasis on individual industries to a recent emphasis on policies that cross industrial boundaries:

- * 1950s: policies for developing and fostering industry (expansion of capacity);
- * 1960s: policies for strengthening the competitiveness of industry in the face of trade and capital liberalization (modernization and technological upgrading);
- * 1970s: policies for enabling industry to adjust to changes caused by the oil crises (restructuring both at the company and industry levels);
- * 1980s: policies for promoting diversified targets such as technology and information network (diversification of industrial structure).

The most distinct element of Japan's industrial policy has been the cooperative relationship between government and industry, each of which recognized the necessity of striving toward common goals. This relationship has been reflected most clearly in emergence of the "deliberative council system." The councils have provided the public and private sectors with a forum for coordinating. They had been well established by the 1960s, when almost all important industrial policies were decided by their respective councils. These councils were formed with industry representatives, former bureaucrats, academics, and others, thus ensuring that the broadest range of interest could be captured and then

synthesized into a policy directive. Without a council reaching a consensus, it is unlikely that policy would materialize as intended.

Industrial policies consisted of direct regulations (special legislation and administrative guidance) and indirect measures (infrastructural development, taxation, subsidies, and policy-based finance). In Japan, these tools were selected by government ministries either as sole policy instruments or more likely as part of a policy mix. In postwar Japan, policy-based finance formed an indispensable element of any policy mix, due largely to its distinct characteristics -- its discretion in selecting projects, its flexibility to respond to changes in policy priorities and objectives, and its pump-priming and cow-bell roles.

3. The Reconstruction Finance Bank and the Priority Production System

In the immediate postwar period, the Reconstruction Finance Bank (RFB) was created to provide finance to priority industries. It accounted for 84% of the total funding for capital investment and 16% of the working capital needs of major industries such as coal, iron and steel, electric power, ocean shipping, fertilizers and textiles. Its contribution to the total financing needs of these sectors amounted to 44% of the total funds provided by all financial institutions. In particular, RFB covered 71% of the total financing needs of the coal mining industry, 88% of electric power, and 66% of ocean shipping⁸. Financing from RFB facilitated the recovery of production of these high priority sectors and paved the way for the economic recovery of Japan during the reconstruction period.

RFB was, however, funded by issuing bonds that were underwritten by the Bank of Japan and this fueled inflation. In fact, the high inflation meant that the fixed interest rates on the loans provided to firms in the priority sectors became highly negative. The loss of control over inflation, combined with a high occurrence of delinquent loans and some financial scandals that damaged the reputation of the RFB, led the Japanese authorities to suspend the operations of RFB in 1949 when the Dodge Line plan for economic stabilization was implemented. The Dodge Line plan aimed to achieve a super-balanced budget and also established a unified and stable exchange rate. The policy caused a major economic recession, reductions in exports and investment, company closures, suspension and production cuts, and even personnel cuts⁹.

⁸ Its funding of the iron and steel industry was only 16%, mainly because this sector borrowed mostly for working capital purposes in that period. RFB accounted for 69% of the sector's borrowing for equipment purposes.

⁹ The experience of Japan in the late 1940s suggests that Japan was an early example of a successful transition from a war-torn, centrally planned and directed military economy into a market-based industrial economy as well as an equally early and successful example of macroeconomic adjustment and restructuring.

Successful implementation of the Dodge Line plan imposed fiscal balance, removed price controls and contained monetary expansion. The policy was followed by deflation, but created the stable macroeconomic environment for the successful implementation in subsequent years of policy-based lending and other industrial policies for the rationalization and modernization of the Japanese industry.

4. The Fiscal Investment and Loan Program

The Japanese authorities established policy-based financial institutions in the early 1950s to provide funding for industrial investment, housing and other purposes. To avoid the inflationary implications of financing these activities through monetary creation, policy-based institutions were financed with resources collected through the extensive postal savings and annuities network and channelled through the Trust Fund Bureau as part of the Fiscal Investment and Loan Program.

The FILP amounted to 4% of GNP in the 1950s, increased to 5% in the mid to late 1960s, fluctuated between 6.5% and 7.5% for most of the 1970s and 1980s, and exceeded 8% in the early 1990s. The rise reflects the increasing importance of postal savings funds. With regard to total lending by the financial system, policy-based finance accounted for 13% of the total in the mid-1950s, fell to 10% in the 1960s, but rose to 15% in the 1970s and 1980s, before declining again to 12% in the early 1990s.

FILP funds have increasingly been used over the years for social (or at least, nonindustrial) purposes, especially for the financing of housing. Their share in the supply of new industrial equipment funds fell from around 30% in the mid-1950s to 20% for most of the ensuing two decades and to around 12% in recent years.

Policy-based finance guided the financial resources of the government and private finance into areas that were most desirable from the view of the national economy. To function effectively, policy-based financial institutions often provided loan conditions that were more favorable than those of private finance. The most favorable interest rate offered by policy-based financial institutions at the beginning of the 1950s was lower than the private-sector long-term prime rate by 3.5%; the least favorable was the same as the prime rate. In addition, policy-based loans were provided for much longer maturities (up to 12 years) and were also free of compensating balances that often increased substantially the cost of private finance, especially for smaller firms. Although policy-based loans continued to be provided at fixed rates of interest, success in maintaining macroeconomic and price stability avoided the occurrence of highly negative interest rates that bedeviled the RFB operations (as well as preferential loan programs in most LDCs).

Policy-based finance was considered to be superior to loan guarantees by private financial institutions. The first problem with loan guarantees was that private financial institutions may make loans too casually if they are able to shift all the risk to the government. Second, a guarantee fee may weaken the effectiveness of the interest rate aspect of policy-based guidance. Third, allowing private financial

institutions to identify and select loan projects autonomously makes it difficult to ensure that policy is applied comprehensively and fairly.

5. The Operations of the Japan Development Bank

JDB initially targeted its financing at basic industries (electric power, iron and steel, coal, and ocean shipping) in which plants and machinery were obsolete, and whose products and services comprised a large share of the cost component of other industries. Modernizing these industries with expansionary investment to crack production bottlenecks was indispensable for increasing exports, sustaining economic growth, and upgrading other industries. At the same time, JDB was instrumental in introducing foreign capital through World Bank loans and serving as the guarantor for private-sector foreign currency loans.

In the mid-1950s, lending areas diversified into infant industries, such as machinery, and new industries, such as petrochemicals. JDB lending to these industries was key toward guiding private financing.

At the outset of the high growth period of the 1960s, JDB began targeting its funding at areas to address the effects of trade liberalization and regional disparities --this in response to the shifting objectives of the Japanese economy. In 1961, as it diversified its funding procurement, JDB also issued foreign currency bonds, playing a pioneering role in introducing foreign capital.

At its inception, the JDB learned several lessons from the RFB. Although the RFB was in a sense the predecessor of the JDB, it did not share JDB's managerial independence. Lending decisions were made beyond the purview of the RFB, and they were not necessarily based on solid appraisal criteria. But the government assured the first governor of JDB that he would not have to bend to political pressure for nonviable projects. The JDB also established a capable loan appraisal department. Thus, loan decisions were left to the professional judgment of JDB staff and officials, while the government was responsible for establishing the basic policy for the operation of funds annually. JDB verified how project funds were spent and assessed their impact. A government auditor also conducted regular annual audits. Thus, a system of multiple checks prevented the inappropriate or illegal application of the funds from policy-based financing. This overall framework enabled JDB to keep its loan losses at a much lower level than that of the private financial sector. JDB made relatively few mistakes in selecting loan projects.

At the time of JDB's establishment, the equity capital contribution from the government accounted for a substantial portion of its total funds. Further, as the accumulation of statutory reserves increased in proportion to increases in its loan balance, JDB's financial composition continued to be favorable. As such, it could offer a preferential interest rate in line with policy demands, without being subsidized by public finance. Its strong financial position also guaranteed its managerial independence.

6. **Project Appraisal, Effective Monitoring and Low Loan Losses**

An important aspect of the operation of directed credit programs that separates the experience of Japan from that of most other developing countries is the quality of appraisal and effective monitoring of projects. These ensured that funds were lent to creditworthy projects and were utilized for the purpose for which they were obtained. The result was a high level of loan repayment and a correspondingly low level of loan losses.

In Japan, loan approval was based on a very detailed appraisal of the projects to be financed and an evaluation of the history and character of the firm involved. The aim was to ascertain the ability of the borrowers to repay their loans. Independent and powerful appraisal departments were established and these were organizationally separate from loan departments. Once projects were approved, no payments were made without adequate documentation, while close cooperation between development and commercial banks ensured continuous monitoring of the performance of borrowers and allowed development banks to take early action if loan repayment was in arrears. The overall economic success of Japan also meant that most borrowers made substantial profits and had little difficulty in repaying their loans.

Effective pre-appraisal and monitoring resulted in very low loan losses for the Japan Development Bank (JDB) which experienced write-offs of 0.09% of average loans outstanding in the period 1951-55 and of only 0.01% in the period 1956-65. In fact, despite its specialization in long-term industrial finance, JDB experienced during the high growth era a much lower level of loan losses than commercial and trust banks that focused more on short-term loans and had a more diversified loan portfolio¹⁰. The superior performance of JDB may partly be explained by its greater reliance on collateral security. This was related to the greater utilization of JDB loans for the acquisition of equipment. But the existence of collateral security provided an additional incentive to firms to repay their loans.

7. **Industry Case Studies: The Application of Policy Measures and Funding**

Four industries illustrate how policy-based finance was combined with industrial policies to address different stages of industrial development.

For the **machine industry** (an infant industry), the government established a special law, and sought to modernize the sector by promoting the renovation of obsolete facilities and the accumulation of capital and technology. It sought to establish machine-specific rationalization plans and arranged for

¹⁰ Firms in declining sectors, such as coal mining and, later, shipbuilding, were often unable to meet their loan obligations. It seems that in Japan, some of the losses of these companies were transferred to the government and absorbed by the general budget. This may explain the unusually low level of loan losses, not only by the JDB, but also by most commercial banks.

JDB funding. Particularly noteworthy was funding to subsectors of machine tools and automobile parts and the guidance offered to guided private financial institutions toward these emerging machine industries.

For the **shipbuilding industry** (an export industry), the loss of its international market after the war was considerable. However, orders for export ships increased after 1950, triggered by a global shipping shortage. To promote exports, the government provided special tax deductions for income earned by exports, established an export insurance system, and arranged for long-term, low-interest deferred payment financed by the Export Import Bank of Japan (EIBJ). From 1950 to the early part of the 1960s, EIBJ financing for export liners accounted for a considerable share of its operations. This financing largely benefitted the shipbuilding industry, and enabled it to become the principal foreign exchange earner in the late 1950s. (It was only 20 years later that the shipbuilding industry, once so conspicuously dominant in the world market, had to undergo extensive restructuring in the face of the worldwide depression and the extensive changes in the industrial structure of Japan.)

The **iron and steel industry** (a basic industry) was the core of the postwar Priority Production System and the target of various policy tools -- including the priority distribution of coal input, RFB financing, and price-support subsidies. The preferential status of the industry continued throughout the 1950s. The tools used to promote the rationalization of the industry included JDB financing, special accelerated depreciation allowances, tariff exemptions on important machinery, and the priority allocation of foreign currency for introducing technology. JDB provided 13% of the funding for capital investments under the First Rationalization Plan between 1951 and 1955. During the Second Rationalization Plan (from 1956 to 1960) JDB served as the "window" through which loans were borrowed from the World Bank.

Japan's **coal mining industry** (a declining industry), also a core component of the postwar Priority Production System, fell into a structural slump following the remarkable energy revolution of the mid-1950s. Government support measures and efforts by the industry could not stop its ultimate decline. Thus, in 1962 the rationalization policies shifted to alleviating the social friction precipitated by the closure of some coal mines. JDB supplied rationalization funds to highly efficient mines in an effort to concentrate production in these mines. In addition, the government provided subsidies for interest payments, mediated the reemployment of those who lost their jobs, and formulated policies to facilitate locating other industries in coal-producing regions.

8. Behind the Good Performance of Policy-Based Finance

Given that the policy-based financial system in Japan (particularly JDB) was instrumental in spurring high economic growth in the postwar period, an understanding of factors and background which made this system function effectively is extremely valuable for other countries that are considering establishing policy-based financial systems. Three characteristics of the Japanese system are most notable.

The first is a **respect for the market economy**. A precondition for a policy-based finance system is the existence of a private sector business structure and private finance that can be supplemented with policy-based finance. In Japan's case, its prewar experience as a market economy and its endeavor to establish postwar economic reform created an environment that fostered an entrepreneurial spirit among the private sector.

The second characteristic (which became particularly evident in Japan as the high growth period unfolded) is the **close relationship between the government's economic plans and policy-based finance**. Through policy-based finance, the priority allocation of financing was implemented in line with government policies that incorporated the will of the private sector. The precondition for this relationship was the existence of a public savings system, and a vehicle for allocating funds efficiently -- that is, the Fiscal Investment and Loan Program

The third characteristic (particularly relevant to JDB) is a **respect for managerial independence** given the existence of a sound financial composition and management. While JDB had inherent limitations as a government-related financial institution, its neutral and fair appraisal base enabled it to make funding decisions autonomously.

B. EMPIRICAL EVALUATION OF CREDIT POLICY IN JAPAN ¹¹

A successful implementation of credit policies would show the following characteristics:

- * Financial support to successful, dynamic industries would decline over time since as a result of their very success, such industries would be expected to repay their loans and achieve financial independence. Even if successful companies might continue to rely on bank loans for financing their expansion plans, they would presumably cease to receive support from government funds.
- * Financial support to declining industries would probably last for longer periods. A basic objective of policy would be to smooth the adjustment process and reduce capacity in an orderly fashion in order to minimize dislocations in labor markets and regional economies. Thus, the provision of government financial support would likely delay the adjustment, but whether this would be economically beneficial or not would depend on the balance between the benefits and costs involved.
- * Financial support to growing firms would be more permanent and would not be affected by the fortunes of particular industrial sectors. However, successful firms would not

¹¹ This section draws on Calomiris et al (1992) and Calomiris and Himmelberg (1994a and 1994b).

only grow into larger units, but would also reduce their reliance on government financial support.

- * Finally, financial support for industrial infrastructure would depend on the capital intensity of such infrastructure. In early stages of development, this would mean investments in electricity, transportation and other heavy infrastructure, financial support would in principle be prolonged. But in later stages of development, much of support would be directed towards research and development as well as education and training and this would not require as large outlays of capital as the development of public utilities.

Two empirical studies have been undertaken recently that lend support to the argument that Japanese policy-based finance was effective in meeting its objectives of "pump priming" and "crowding in" private credit for growing firms in industries that benefit from dynamic comparative advantage. Horiuchi and Sui (1993) compared the investment behavior of "medium-size" firms receiving JDB assistance with other firms of similar size over the period 1964-1988. They found that the year of initial JDB lending was associated with increased investment and also that within three years firms began to move away from reliance on JDB lending to rely more on private banks. Horiuchi and Sui also found that directed credit was more effective for firms that did not have main bank affiliations.

Calomiris and Himmelberg (1994b) examined the effect of policy-based finance over the period 1963-1991 for the machine tool industry, an industry selected for its high potential for spillover effects due to technological innovation and learning. Machine tool producers underwent considerable consolidation during the 1960s and 1970s, which was associated with the introduction of new technologies and the achievement of unusually large economies of scale.

Their study is based on firm level data collected with the support of the Japan Development Bank. The dataset covers only surviving firms and excludes firms that exited during the period. This makes the identification of positive effects from policy-based finance more difficult, particularly during the consolidation phase of the 1960s and 1970s when less productive firms exited or were merged with other firms.

The level of investment undertaken by machine tool producers declined over the period. It averaged 27% of capital from 1965 to 1974 but fell to 10% from 1975 to 1991. Similarly, total long-term debt fell relative to capital from 41% prior to 1975 to 26% afterwards. Directed credit was a small proportion of total long-term credit. Total government credit fell from an average of 3% of capital prior to 1978 to 1% after the mid-1980s or from over 7% of all long-term credit to less than 4%.

A comparison of lending to general machinery producers by JDB with private long-term lenders as well as with the Export-Import Bank of Japan provides some interesting insights. JDB lending to

general machinery producers declined from between 3.7% and 5.3% of capital in the late 1960s to between 1.7% and 3.5% in the 1970s and between 0.8% and 2.6% in the 1980s. This shows a clear declining trend in JDB support consistent with the premise that government credit relaxed borrowing constraints and helped firms to become seasoned credit risks. Credit from the Industrial Bank of Japan to general machinery producers ranged between 5.8% and 8.9% of capital in the late 1960s, between 6.0% and 8.7% in the 1970s and between 4.0% and 6.6% in the 1980s. Thus, despite the growing recourse of Japanese firms to the euromarkets in the 1980s, their reliance on IBJ funding did not experience the same decline as that on JDB. In contrast to the JDB pattern, borrowing from the Export Import Bank of Japan registered a large increase from between 0.4% and 0.9% of capital in the 1960s to between 3.0% and 6.0% in the 1970s and between 3.8% and 19.9% in the 1980s. The growing reliance on EXIM loans must be associated with the maturity of the industry and the greater part played by exports and perhaps also overseas operations in the more recent period. Thus, support from government sources showed considerable flexibility and adaptation in line with changes in the structure and orientation of the industries and firms that received government credit support. Similar patterns are also observed for the other types of machine tool producers.

Calomiris and Himmelberg found that there was no capture of government funds either at the industry or at the firm level. Directed credit was usually provided to a firm only once and it lasted for a brief period (80% of firms received credit only once and the average credit spell was less than 8 years). They also found that government credit was provided to growing, large, capital intensive firms with higher investment rates. Moreover, directed credit appeared to bolster the positive characteristics of recipient firms and thus to reinforce the process of consolidation, investment and technological change of the firms to which government credit was targeted. Government credit also had a significant, positive impact on investment and was positively correlated with private credit¹².

Over the whole sample period, a 100 yen government loan produced a 60 yen investment. The effect of JDB credit was even stronger as a 100 yen JDB loan led to 150 yen investment and to 44 yen long-term loans from private sources. The effect of credit from JDB was larger and more significant during the 1970s and 1980s, while in the 1960s credit from other government agencies was equally responsible for the overall effect of government credit. A possible explanation may be a change in lending policy by other government lenders in the 1980s away from producers with high growth potential.

¹² The results reported in Calomiris and Himmelberg (1994b) were weaker than those reported in an earlier paper (Calomiris and Himmelberg 1994a) that focused on the period 1982-91. The main reason for the weaker results seems to be the use of a different methodology in conducting the empirical tests. But another reason may be a selection bias in the larger sample covering the longer period as firms that exited in the 1960s and 1970s are not included in the dataset that basically includes surviving firms. If exiting firms were low-investment, poor-performance firms while surviving firms were more likely to receive government credit, then the effect of government credit would be under-estimated. In addition, accounting data for the earlier years are probably less reliable.

C. CREDIT POLICY IN KOREA ¹³

1. Objectives

Korean experiences are different from Japanese experiences in several respects. Unlike Japan, credit policy in Korea involved significant subsidization of the cost of borrowing. The coverage of the programs also was much more extensive. The programs heavily involved commercial banks as well as development banks. Both types of banks were owned by the government and were directed to channel their loans to priority sectors. An important feature of credit policy was the coercive nature of government intervention as firms with minimum equity funds were encouraged to enter particular industries, with a strong package of tax and financial incentives. The government also had strong leverage toward firms through its control over the banking system as additional credit could be denied to, or existing credit withdrawn from, faltering firms.

The operation of credit policy in Korea has also gone through three distinct phases:

- * In the 1950s and 1960s, credit policy was oriented toward particular activities, mainly exports and industrial investment.
- * In the 1970s during the drive for the development of heavy and chemical industries (HCI), credit policy became more geared toward promoting specific industries. During the HCI drive, the Korean authorities relied heavily on their control of the entire credit system and provided "strategic" industries preferential access at substantially subsidized rates. The use of policy-based loans was pervasive.
- * The successes and failures of the HCI drive induced a change in government approach in the 1980s. First, the authorities became involved in industrial and financial restructuring of industrial sectors and companies in distress. As in Japan, Korean credit (and industrial) policy started to be preoccupied not only with "picking winners" but also with "phasing out losers". Second, the focus of policy was reoriented towards producing a more balanced industrial sector that would not be dominated by a few business conglomerates. As a result, lending to small and medium-size firms received greater attention. And credit policy was reoriented toward functional activities such as research and development and equipment investment.

¹³ This section draws on Cho (1989), Cho and Kim (1994), Vittas and Wang (1991), and World Bank (1987).

2. Evolution of Policies

Directed credit programs adjusted flexibly to meet the business sector's needs following close consultation with industrial leaders. New credit programs were created to channel financial resources toward new industrial opportunities while old programs were de-emphasized.

In the early 1960s, the government undertook a series of measures to strengthen state control over finance: it nationalized the commercial banks and amended the central bank act to subordinate the Bank of Korea to the government. Interest rate reform, implemented in 1965, doubled the level of bank interest rates and resulted in rapid growth of deposits in the government-controlled banks, shifting funds from the informal credit market. But it also enabled the government to enhance the scope of its control over the allocation of financial resources as the funds shifted from the unregulated to the regulated sector.

Credit supports in the 1960s were structured toward promoting exports without much sectoral bias. In terms of the level of interest rates and the degree of credit control, credit policies in the 1960s (take-off stage) were no more pervasive than those of 1950s. The difference was in the way in which the policies were used and managed. In the 1950s, they were often used without clear industrial policy goals. In contrast, in the 1960s, they were structured toward providing export support and they were better linked with other policy measures.

Furthermore, the government initiated close consultations with the business sector and monitored very closely the performance of supported firms. The "Monthly Export Promotion Meetings" and "Monthly Briefings on Economic Trends," which were chaired by the President, constituted a forum both among ministries and between the government and the private sector. In these meetings, progress towards achieving policy goals was closely monitored and consensus could be reached on how to deal with emerging problems. Economic management resembled that of a major corporation. The banks were effectively used as a treasury unit, the industrial sector as the production and marketing units, and the government as the central planning and control unit. Korean credit policy thus resembled internal transactions of an organization.

In the 1970s, with the drive for development of heavy and chemical industries (HCIs), credit policies were geared toward supporting HCI investment. In the 1980s, the government intended to reduce policy interventions in the credit market but, in practice, it continued to intervene as it was forced to be involved in the restructuring of industrial firms facing financial difficulties, because of overexpansion in the late 1970s and the collapse of foreign markets (in shipping, shipbuilding and construction) in the early 1980s. Government had become entangled in a vicious intervention circle. But with political democratization in the late 1980s, the structure of directed credit programs changed, giving greater emphasis to social programs and the redistribution of income.

3. The Size, Structure, and Sources of Policy Loans

In Korea, the share of policy loans in the total funds mobilized by the financial system was substantial. It was about half of total credit by domestic financial institutions in the 1970s, but gradually decreased to about 30 percent of total credit as nonbank financial institutions, which were free from policy loans, expanded in the 1980s. However, for deposit money banks (DMBs), policy loans accounted for about 60 percent of their total loans throughout the period.

Policy loans were extended mainly to the manufacturing sector in the 1960s and 1970s. As a result, in 1970 and 1980 for example, the manufacturing sector received 46 percent and 54 percent of total bank loans while the service sector received only 29 percent and 24 percent respectively. The manufacturing sector's share in total bank credit was more than twice its share in GDP, while the share of the service sector was only about 60 percent of its share in GDP. Among manufacturing industries, export and heavy and chemical industries received more credit than domestic sector and light industries compared to their share in GDP.

A significant difference of selective credit policy in Korea from that of Japan lies in the source of policy loans. Korea has depended heavily on central bank credit and deposits mobilized by commercial banks, and much less on fiscal funds or funds mobilized through government, such as postal savings. Japan has mainly depended on fiscal funds and postal savings. In Korea, among total policy loans extended by commercial banks, only 7 to 8 percent were financed by fiscal funds. On the contrary, about 35 percent of total policy loans by commercial banks were financed through central bank credit. The central bank's discount policy has been the major tool for guiding commercial bank loans to strategic sectors. Policy directed loans in Korea have relied heavily on money creation and this is probably the main reason why Korea has had less price stability than Japan.

4. The Role of Foreign Capital

Many observers overlook the role of foreign capital in shaping the economic policies, including financial sector policies, and the development course of Korea. Foreign capital made a big difference in Korean economic development, because domestic savings were far below the desired investment levels. The average economic growth rate during 1962-82 was 8.2 percent. According to a rough estimate, if investment had totally depended on domestic savings, the average growth rate during the same period might have been only 4.9 percent. This indicates that the high Korean economic growth was possible through heavy reliance on foreign savings. Without ready access to foreign capital, Korea could not have continued its repressive financial policies, which limited the mobilization of financial resources, or might have ended up with a much lower rate of economic growth.

As with domestic credit, foreign loan allocation was also tightly controlled by the government to support industrial policy goals. All foreign loans had to be authorized by the government and their

allocation was determined following the industrial policy goals. In 1965, the government revised the Foreign Capital Inducement Act to allow the government-controlled banks to provide guarantees for the repayment of foreign borrowing by firms, which facilitated inflows of foreign capital and technology. This, however, also caused the continuation of government intervention in the banks. The external shock to domestic firms, which made it difficult for them to meet their foreign debt service, often had to be absorbed through rescheduling of domestic bank loans since the default of foreign loans could lead to major disruption in financing development projects. The cost of government intervention in domestic banks in turn had to be shared by depositors.

5. Policy Effectiveness

The effectiveness of credit policies for economic growth can be evaluated in two broad aspects: first, their contribution to the growth of industries or sectors through the cost subsidies and favorable access to capital; and second, their contribution to industrialization through motivating private entrepreneurship by the provision of government's risk partnership to the private sector.

Available data indicate that Korean credit policies were effective in reducing the cost of funds and enhancing access to funds by priority sectors. The export oriented firms enjoyed greater access to credit and lower borrowing costs than domestic oriented firms. HCIs also enjoyed greater access to credit than light manufacturing industry. Despite its high risk, the borrowing cost of HCI was significantly lower than that of light industry, owing to large credit supports, including various policy loans. In general, it is assessed that this helped the rapid expansion of these sectors, especially in their take-off stage.

However, the above evidence does not necessarily imply that selective credit supports were essential for rapid economic growth since it is very difficult to estimate the opportunity cost of such supports. For this, a general equilibrium analysis would be required. But in Korea, since substantial parts of input and output prices were controlled in the early stages of development, even a general equilibrium analysis would face severe limitations. At the same time, it is too early to provide a full answer to this question, since Korean economic development is still in progress, and the cost of past financial policies may not have been fully realized.

In the case of export growth, there seems to be little controversy that it was the main engine of growth in Korea in the 1960s and 1970s. To the extent that credit support was indispensable for export growth, which seems to have been the case, credit support must have contributed to rapid economic growth, although there remain doubts as to whether a large subsidy was necessary to kick-off export growth. In the case of the HCI drive, however, its effect on growth remains controversial. Although the credit supports contributed to the rapid development of HCI, credit might have been used more efficiently if its allocation was better balanced between the HCI and light industry, given the labor endowment in the 1970s. But the HCIs became the leading export industry in Korea starting in the mid-1980s. It could be argued that if the HCI drive had not taken place in the 1970s, Korea might not have

been able to take full advantage of the appreciation of the Japanese yen and world economic boom in the second half of 1980s. No solid answer can be provided to this question.

The impact of credit policies on industrialization is not limited to its impact on the cost and access to credit. In an economy like Korea, where the initial capital accumulation was poor and rapid investment growth had to be financed mainly by bank credits and foreign loans, firms had highly leveraged financial structures. In such a credit-based economy, financial crises would have occurred with major economic downturns unless some risk sharing schemes between the creditors and borrowers existed. By controlling finance, the Korean government could become an effective risk-sharing partner with industrialists and could thus motivate their risk venture and entrepreneurship. It could induce the industrialists to have long-term horizons in their business. In other words, by controlling finance, the government established an implicit government-industry-bank co-insurance scheme. Without such implicit risk partnership, Korea might not have been able to establish large industrial firms with international standing within such a short period of time. This indirect impact of the government credit policies may have been a more important factor than the credit subsidies as such for explaining the rapid industrialization of Korea.

6. The Cost and Legacy of Credit Policies

Control over finance strengthened the government's hand for implementing industrial policy, and helped foster the quick establishment of industrial firms with international reputations. But this was not costless.

Several commentators have argued that the credit policies pursued during the HCI drive were very costly and that the HCI drive was overambitious and resulted in serious misallocation of resources. The preferred sectors expanded production capacity too rapidly, while firms did not have sufficient time to accumulate experience and digest new technologies. The resulting low quality products could not be exported and most firms were characterized by excess capacity, high production costs and low product quality. The unsupported sectors were forced to borrow at very high rates from the informal sector and the dual nature of the credit system created a major imbalance in the industrial structure of the country (Koo 1984, Kwak 1984).

As Korea relied on credit interventions too heavily and for too long as an instrument of industrial policy, the costs were born heavily by banking institutions and depositors. Commercial banks in Korea were involved so heavily in directed credit programs that they almost functioned as development banks. In the process their management efficiency and quality of services were sacrificed. They also had large volumes of non-performing loans. NBFIs, which operated more freely, expanded rapidly and superseded the banks' share in the financial intermediation market. To some extent, the expansion of NBFIs contributed to improvement of financial market operations by keeping competitive forces alive in the financial system, which would otherwise have been overly repressed.

The problem of moral hazard for commercial banks has been no less serious. As long as the government was willing to rescue firms, banks did not have to pay much attention to screening projects and monitoring the firms. The government-supported firms became too large and dominant to go bankrupt. Large financial support was given to ailing firms or industrial sectors in the mid-1980s when many individual firms and business groups suffered heavy losses from excess capacity and the collapse of export markets in the aftermath of the second oil shock and the worldwide recession of the early 1980s, although detailed data on this are not readily available. These problems made it increasingly difficult for the government to break out of the vicious circle of financial repression. When the expansion of the Korean economy and increasing sophistication of the industrial structure called for a more innovative and market-oriented financial sector, the past legacy became a constraint for liberalization.

As the industrial policy emphasized the economies of scale to maintain international competitiveness, it led to overwhelming economic concentration within the Chaebols. It was not uncommon for the Chaebols to triple the number of their affiliates with new acquisitions in heavy and chemical sectors during the period of the HCI drive. In the face of growing public discontent against excessive economic concentration, the government had to redirect policies to emphasize the redistribution of income, which often involved increased regulation on the business activities of large firms.

D. CREDIT POLICY IN CHINA ¹⁴

Budgetary allocation of all financial resources can be regarded as an extreme form of policy lending under the planning system. Since China relied heavily on budgetary funds to finance its investment and production before and during the early period of the recent reform, policy lending was one of the main instruments of financing China's economic growth and development.

The rise of the more market-oriented non-state economic sectors has reduced the importance of policy directed lending for China's overall economic growth and development. Policy directed lending has evolved into a vehicle for financing a few shrinking or stagnant state sectors and of supporting price control in farm and export-import products. New firms in the private sector in the economic zones have been financed by large inflows of overseas capital, especially from the Chinese diaspora.

Policy loans certainly contributed to a gradual and orderly transition of the Chinese economy. In particular, policy directed lending played an important role in cross-subsidizing key state supported investment projects and price control schemes in farm and export-import products. But, the growth and productivity performance of priority sectors were poor. Also, many policy loans were either diverted or turned into bad loans.

¹⁴ This section draws on Xiao and Xu (1993).

The implementation of policy directed lending in China has been heavily influenced by the underdevelopment of the private financial institutions, the immaturity of the financial markets, the rapid growth of market-oriented economic activities, and the considerable decentralization of decision-making power from the central government to local governments and local financial institutions. Central government found it very difficult and costly to monitor closely the waste and diversion of financial resources to priority sectors.

Policy directed lending was closely associated with excessive credit expansion during the reform period. The priority loans became one of the major channels for expansion of central bank credit, which then generated excessive credit expansion in the economy. In recent years, about one third of total bank credit was allocated for policy-based lending and most of it was financed by central bank credit. Most priority borrowers benefitted from negative real interest rates. Moreover, banks often operated with negative spreads. Sometimes, the banks were compensated by transfers from the budget, but in other cases, they absorbed the negative spreads. This approach created inflationary pressures and price instability similar to those experienced by Korea in the 1960s and 1970s.

Policy directed lending in China had a very significant indirect impact on non-priority sectors through excessive credit expansion and distorted implementation of policy loans. For example, the rural Township and Village Enterprises (TVEs) were not a priority sector and received very few subsidized loans. Nevertheless, TVEs have expanded very rapidly through both self-financing and heavy borrowing from the banking system. The ratio of the loans to TVEs over the total state bank loans increased from 2.2% in 1979 to 6.1% in 1984 and 8.5% in 1991. The rapid growth of non-priority sectors such as TVEs increased the supply of goods and services and reduced the inflationary pressure rooted in credit expansion.

Policy directed lending has now become a crucial issue for China's macroeconomic stability, financial sector reform as well as economic transition in general. The issue of policy lending is closely related to a number of important economic problems: the future of the loss-making large state-owned enterprises; the growth of non-state enterprises; the stability of farm production and marketing; the stability of exchange rates; and the general price level.

E. CREDIT POLICY IN INDIA ¹⁵

During the last few decades, India has experienced rapid financial deepening. Owing to its stable macroeconomic environment, it now has an impressive financial system, which ranks in the top quarter among the financial sectors of most developing countries. Until the liberalization of the financial system in 1991, one of the key policy instruments used to steer the financial sector was the directed credit policy

¹⁵ This section draws on Madhur (1993).

of the government. Allocation of a significant proportion of the financial sector funds was done by government directives at administered interest rates.

In India, 90% of the commercial banking sector was under state-ownership. Commercial banks were required to invest 15% of their funds in cash to fulfil the cash reserve requirement and an additional 38% in government and government-approved securities. By the end of 1991, 63.5% of the increase in bank deposits had to be invested in government and government-approved securities. Interest rates on these securities were pegged below market levels. In addition, 40% of the remaining funds (i.e. nearly 19% of their total funds) were required to be lent at somewhat concessional rates to priority sectors. Thus, more than 70% of the funds of commercial banks were subject to government direction. Of the remaining funds, banks were expected to meet the credit requirements of exporters at concessional rates and the buffer-stocking operations of the government in food grains. Export credit and food credit constituted respectively about 4% and 1% of total funds, thus leaving less than 25% for lending at the discretion of the banks.

Nonbank financial intermediaries, which included cooperative banks, postal savings, development banks, provident funds, insurance companies and unit trusts, were also required to invest a sizable proportion of their funds in government securities or in approved loans. Statutory investments and priority credits amounted in total to about 50% of all funds mobilized by the financial system. The interest rate subsidy, calculated as a differential from the banks' prime rate, ranged between 3% for government securities and 5% for agricultural loans.

Unlike in Japan and Korea, where directed credit policy was aimed at channelling funds to large industrial firms, the key objective of directed credit policy in India was to channel resources to what were considered socially desirable sectors and weaker sections of the population - such as agriculture, small-scale industrial units, and poorer households. State enterprises also benefitted from the capture of large funds for government use through the statutory investment requirements. On a balance of considerations, it appears that directed credit policy had mixed results in achieving its objectives. The increased flow of credit to the priority sectors benefitted them in that it generally had positive effects on investment, output, employment and incomes of these sectors. However, these achievements were not costless.

While solving some of the old problems, such as high concentration of credit in large business houses and its inadequate availability to other productive sectors, directed credit policy gave rise to new problems. The most important of these problems was the substantial cross-subsidization of directed credit by the medium and large industrial sector. Beyond a certain limit, such cross-subsidization led to unsustainably high interest rates on industrial finance.

IV. ECONOMIC AND INSTITUTIONAL FACTORS FOR SUCCESSFUL CREDIT POLICIES ¹⁶

The list of theoretical arguments and practical considerations set out in the introductory sections of this paper suggest that credit policy could be an effective policy instrument for economic development. The question then arises why did credit policies fail in so many countries around the world and what factors explain their relative success in East Asian countries.

The experience of East Asia shows that both economic and institutional factors are very important. Economic factors include the maintenance of macroeconomic stability, export orientation, domestic competition, reliance on private sector, and bias toward industrialization. Institutional factors cover the creation of effective monitoring systems, the use of extensive consultation arrangements and the development and propagation of credible visions.

A. ECONOMIC FACTORS

Macroeconomic Stability. Most East Asian countries were able to maintain macroeconomic stability, with small exceptions now and then. Macroeconomic stability in itself does not, however, seem to be a sufficient condition. Several other countries in other parts of the world, such as the Middle East and North Africa, Southern Europe, and South Asia, also avoided the high inflation rates of some Latin American and African countries. For instance, India maintained better price stability than Korea. Yet neither their economic performance nor their credit policies were as successful as those of Japan and other East Asian countries. Nevertheless, macroeconomic stability seems to be very important for encouraging the growth of financial savings. India and other countries with moderate inflation, compared to other developing countries with similar level of per capita income, experienced substantial deepening of their financial sector. Japan, whose macroeconomic environment was very stable, also experienced steady and rapid growth of its financial system. Korea, on the other hand, had relatively high inflation and poor growth of financial sector in the 1970s, although its experience was reversed in the 1980s. The recent rapid growth of holdings of financial assets in China, where the macroeconomic environment was relatively stable compared to other developing countries, also supports the importance of price stability.

Competitive Product Market Environment and Export Orientation. The main difference between the high performing East Asian economies and other countries lied in the fact that macroeconomic stability in East Asia was combined with intense domestic competition, strong export orientation, and reliance on the private sector. In Japan and Korea, although there were import protection, strong competition prevailed in the domestic market among large industrial firms. Even in the economically stable countries of Middle East and North Africa, Southern Europe, and South Asia

¹⁶ This section draws on JDB/JERI (1994), Cho and Hellmann (1993), and Vittas and Kawaura (1994).

industrial production was often oriented toward the domestic market, was sheltered from both domestic and foreign competition, and was in the hands of state-owned enterprises. Export-orientation forced domestic firms in Japan, Korea and other East Asian countries to be internationally competitive and attain high levels of efficiency. The strong export orientation also provided objective criteria for monitoring the performance of individual firms and assessing the effectiveness of credit support. For example, good performers in export markets implied continuing access to policy-based finance. Product market competition and the link between market performance and credit support limited the risk of government failure. In India and other developing economies, import substitution policies and monopolies of public firms limited domestic competition. The latter enjoyed economic rents and were often the major recipients of credit supports for industrial development.

Effective Policy Coordination. The goals of credit policies were narrowly focussed and they were well coordinated with other policies. In Japan and Korea, the main goals of credit policies were industrialization and export promotion. Other policy measures, such as foreign exchange, tax, and fiscal policies, were also geared toward these same goals. In Japan the allocation of foreign exchange, and in Korea the approval of foreign loans, were coordinated with domestic credit policies to support effectively the industrial policy goals. In contrast, credit policies in India, for example, focussed on redistribution of income and wealth, with large emphasis on small farmers and firms. Therefore, credit programs to support manufacturing and exports were largely offset by the emphasis on redistribution. This often resulted in implicit taxation of large industries to support farmers and small business as was mentioned above.

B. INSTITUTIONAL FACTORS

Successful management of credit policies depends crucially on institutional arrangements. These include effective monitoring systems, extensive consultation arrangements and credible visions. Institutional factors have

Effective Monitoring Systems. Reference has already been made above to the effectiveness of monitoring in Japan and Korea. Loan approval was preceded by careful design and independent appraisal, while monitoring of fund utilization was very strict. Fund disbursement was based on adequate documentation. Moreover, continued access to policy-based loans depended on attainment of objective targets, mostly in internationally competitive export markets.

The importance of this factor cannot be overemphasized since what matters for economic development is not really the mobilization and allocation of financial resources but their efficient utilization. After all, any country can mobilize resources by printing money which can then be allocated to priority sectors. Although such money creation will increase inflationary pressures, if the resources are utilized well and lead to higher and more efficient levels of production, unit costs may be lowered and may offset the inflationary impact of monetary financing of development.

Effective Consultation and Coordination Arrangements. Participatory government intervention, based on government-led internal organizations (GLIOs), such as the deliberative councils and numerous industrial associations that characterize Japan and Korea as well as other East Asian countries, can play an important part in avoiding the pitfalls of credit policies (such as adverse selection, moral hazard and low recovery rates) and ensuring the allocation of scarce resources to activities with positive externalities and long-term benefits. Both Japan and Korea developed effective networks that contributed to the relative success of their credit policies. In contrast, such organizations have been largely absent in China and India.

Government-led internal organizations provide an improved mechanism for risk-sharing with the providers of finance, resulting from the backing of governments for preferred activities. In addition, they may overcome to some extent the uncertainty facing particular firms through the implicit or explicit commitment of governments to particular enterprises. Through monthly economic briefing meetings and deliberative councils, they may also stimulate the collection and exchange of information and facilitate more effective monitoring. Through these arrangements, governments promote consensus among the different participants not only through moral suasion but also through the provision of direct incentives (both "sticks" and "carrots") to achieve cooperation and coordination. However, such organizations are confronted with risks of moral hazard, manipulation and inefficient implementation. They can improve the allocation of credit over market solutions only if there are strong safeguards against abuse.

Credible Visions. A very important factor behind the success of credit policies in East Asia was the ability of government agencies to implement policy, appraise projects, monitor performance and ensure compliance. The fact that policies were designed in extensive and effective consultations with the private sector facilitated their acceptance and stimulated cooperation in their implementation. However, an important factor also was the existence of credible visions about the goals and instruments of industrial policy.

Economists have generally paid little attention to the importance of credible and consistent visions. These are not equivalent to detailed quantitative plans but are rather concerned about broad aspects of strategy. Although it is difficult to generalize for all East Asian countries, the visions with regard to industrial policy seem to have included the following:

- * A clear priority of industrialization and economic development ahead of financial sector development. Most statements of Japanese officials implied that industrialization and economic growth took precedence over the development of an efficient and modern financial sector. To be sure, the authorities were committed to ensure the safety of deposits and the solvency of financial intermediaries but were less concerned to allow banks and other financial intermediaries to innovate and develop new services aiming at reducing the cost of financial intermediation. There were many controls on bank spreads and interest rates, on branching and bank mergers, and on bond issues, while

administrative guidance discouraged lending for consumer credit and housing finance and encouraged the creation of large industrial/financial groupings. The promotion of bank-centered groups encouraged close links between banks and their industrial customers and facilitated the close monitoring of the performance of industrial companies. In fact, government financial institutions relied to a significant extent on the short-term and day-to-day monitoring of industrial firms by their commercial banks.

- * Encouragement of industries, such as steel, oil refining, petro-chemicals, automobiles, aircraft, industrial machinery of all sorts, and electronics, including electronic computers, where income elasticity of demand is high, technological progress is rapid, and labor productivity rises fast. The strategy emphasized dynamic comparative advantage rather than static cost considerations (Ojimi 1972, Johnson 1982, Yotopoulos 1991).
- * The emphasis on complementarities in production for both the domestic and export markets, which supported the income doubling plan of Japan in the 1960s as well as the Korean HCI drive in the late 1970s. Promoting both exports and domestic sales allowed a shift of resources to exports when problems in the international balance of payments forced the government to curtail domestic demand. But when the problems of paying for imported raw materials eased, the focus was shifted on expanding sales at home. If this could be achieved, factories could keep operating throughout all phases of the business cycle and could thus achieve a higher scale of production and lower operating costs (Johnson 1982, Yotopoulos 1991).
- * A continuous shifting in the focus of industrial policy. This was more pronounced in Japan but was also evident in Korea and other East Asian countries. In Japan, industrial strategy first emphasized the recovery of priority production, then the modernization of equipment in heavy industries, and then the development of new industrial sectors with high potential externalities, such as the machine tools industry. The strategy also included the smooth adjustment of declining industries and covered the restructuring of companies that faced difficulties and the rationalization of whole sectors of industry that suffered from overcapacity. Finally, with the achievement of high levels of industrialization, the focus changed to improving the quality of life, with more spending on the environment and pollution control, housing, and other social infrastructure projects.
- * The adoption of credible visions also had implications for policy-based finance. Credit policies were only one of the industrial policy instruments. Although Japanese and other East Asian officials often emphasized the superiority of policy-based finance over direct budget subsidies and grants in promoting industrialization, they also made extensive use of other instruments, such as accelerated depreciation allowances and tax-free special

reserves. These allowed profitable and successful firms in the promoted sectors to retain and reinvest a larger part of their profits than firms in nontargeted sectors. Particularly important because of its link with the overall strategy of export promotion and export push were the special reserves that were linked to past export performance. These noncredit-based incentives reinforced the impact of credit policies and helped to stress the credibility of the programs.

- * The existence of a coherent and credible vision also lent credibility to the consultation processes and deliberative councils. Many other countries around the world tried to promote close consultation between government and the private sector but, in the absence of a coherent vision, such exchanges became little more than forums for special pleading or ineffective talk shops.

- * A very important contribution of government in some East Asian countries was the compilation and dissemination of information about longer term sectoral prospects, an activity that is not readily undertaken by the private sector and private securities markets where there is greater emphasis on collection of data with short-term payoffs (e.g. price discovery in futures markets). Again the existence of a credible vision and the carrot and stick approach that were used to encourage cooperation resulted in the collection and analysis of broadly reliable data about the prospects of particular industrial sectors. These reinforced the signalling effect of policy-based finance and encouraged commercial banks to provide additional financial support to companies that received credit assistance from government financial institutions.

The existence of a coherent and credible vision did not imply that it was inspired and imposed by government bureaucrats on an unwilling private sector. On the contrary, most studies of Japanese and East Asian finance and industrial policy emphasize the close links and extensive consultation between bureaucrats and representatives of the private sector¹⁷. Proof that the strategic vision was not imposed from above is provided in Japan by the few examples where bureaucrats were perceived to have gone too far and the business sector fought successfully against the adoption of particular laws. Perhaps the best example is provided by the defeat of the 1963 draft law on Special Measures for the Promotion of Designated Industries, which was rejected because of opposition to granting explicit draconian controls to MITI officials (Johnson 1982).

¹⁷ Ohmae (1982) went further and argued that there was extensive cooperation and cohesion between corporate managers and workers. He pointed out that in Japan a corporation was seen as an assembly of people, each known as a member (not an employee). He also stressed the importance of primary education and the role of the government as coach, not captain.

Credible and coherent strategic visions also existed in Korea, Singapore and other East Asian countries. These are described and documented in the East Asian Miracle study (World Bank 1993). Of course, the existence of grand visions does not necessarily imply that industrial and economic success should be fully attributed to them. In some cases, visions may have been too ambitious (e.g. Korea), in others they may have been too diffuse (e.g. Thailand or Indonesia). Moreover, visions and the industrial policies they have embraced may turn out to involve significant long-term costs. These are unlikely to offset the benefits of higher growth or to undermine the achievements of industrialization and development, but they are bound to lower the net benefits from this approach.

V. SUMMARY AND LESSONS

To summarize and conclude this paper, we first provide a comparative analysis of credit policies in the four Asian countries under review and then list the main ingredients of successful credit interventions.

A. COUNTRY EXPERIENCE IN COMPARATIVE PERSPECTIVE

The comparative analysis covers key aspects of credit policies such as the scope and size of the programs, the level of subsidies, the sources of funding, the types of implementing institutions, the quality of monitoring and supervision, the rate of loan recovery and loan losses, and the underlying strategy and focus of credit policies.

Scope and Size. Of the four countries, the scope of credit policies was more narrowly focused in Japan, even though it was targeted toward exports, large industry, declining sectors, and for socioeconomic purposes. Except for the immediate reconstruction period, the size of directed credit programs did not exceed 15% of the total funds mobilized by the financial system. Even if the funds mobilized through the Bank of Japan's rediscounting policies and the "overloan" position of large commercial banks are included, the total "directed" credit funds did not exceed 20% of total financial sector funds. In Korea, directed credit programs were also heavily focused toward exports and large industrial units, although in the 1980s there was a shift in favor of lending to smaller firms. In Korea, directed credit programs were more extensive than in Japan and amounted to over 50% of total funds in the 1970s, though they fell to around 30% of the total funds of the financial system in the 1980s following the rise in the relative share of finance companies and other nonbank financial intermediaries. In China, policy-based lending amounted to about a third of total bank credit. Credit allocation continued to be reminiscent of budget allocation in a socialist economy, while directed credit programs were mainly targeted toward large state-owned enterprises. In India, directed credit programs covered lending to small firms and rural farmers as well as the government sector. Over 70% of the resources of Indian commercial banks were subject to government direction, while around 50% of the funds of the whole financial system were subject to statutory reserve or priority credit requirements.

Level of Subsidy. Generally, the level of subsidy was small in all four countries, mainly because of their ability to maintain relative macroeconomic and price stability. The level of subsidy was perhaps largest in Korea and more recently China where inflation was on some occasions too high. It was also very large in Japan in the high inflation years of the late 1940s. In Japan, where policy-based loans were not subject to compensating balances, the level of subsidy of borrowing from policy-based financial institutions was greater than the reported nominal spread between interest rates on policy-based loans and interest rates on other loans because of the impact of compensating balances on commercial bank loans, especially for lending to smaller firms. In Korea and China, real interest rates paid on policy-based loans

were often negative, though they did not reach the very low levels seen in many other developing countries that suffered from persistently very high inflation.

Sources of Funding. The sources of funding in Japan after the implementation of balanced budgets and tight monetary control in the late 1940s were fiscal funds based on the mobilization of postal savings. In India, directed credit programs were also funded from savings deposits as well as long-term contractual savings. In these two countries, central bank credit played a relatively minor part, although in Japan the central bank rediscount window was occasionally a major source of funds, especially in the 1950s and early 1960s, to accommodate the "overloan" position of the large commercial banks. In Korea and China, central bank credit was far more important in funding policy-based loans and this contributed to the higher rate of inflation experienced by these two countries. Foreign debt capital was an important source of policy-based funds only in Korea, where the government encouraged recourse to foreign borrowing but subject to strict controls and direction. In China, inflows of foreign capital, mainly from the Chinese diaspora, supported the operations of new firms in the economic zones. In Japan and India, foreign capital was a less important source of funding, mainly because of the desire of the authorities to limit dependence on foreign sources of capital.

Implementing Institutions. In Japan, the institutions involved in extending policy-based finance were mainly the government financial institutions, though the private long-term credit banks also played an important part. Commercial banks provided support for export finance, especially through the central bank's rediscount window, and were subject to administrative guidance that favored lending to industry. In contrast, in Korea, not only special banks such as the Korea Development Bank and the Export and Import Bank of Korea, but also the commercial banks, which were state-owned and controlled, were heavily involved in policy-based finance. The same was also true in India and China.

Monitoring and Supervision. A distinguishing feature of policy-based finance in Japan and Korea was the close degree of monitoring and supervision of the allocation and utilization of preferential funds. Both countries promoted close consultation, coordination and information exchange between the government and the private sector. Loan approval was preceded by careful design and independent appraisal. Monitoring of fund utilization was very strict. Fund disbursement was based on adequate documentation, while continuation of access to policy-based loans depended on attainment of objective targets, mostly in internationally competitive export markets. In China, monitoring and supervision were much less effective, reflecting in part the considerable decentralization of decision making power away from the central government to local governments and local financial institutions. This resulted in considerable diversion of funds to nonpriority uses. India also suffered from lax monitoring and supervision.

Loan Recovery and Loan Losses. Partly because of stricter monitoring and partly because of the achievement of very high growth rates over a persistent period, loan losses in Japan were unusually low. However, the reported very low loan loss rates may also be attributed to the absorption by the

general budget of losses from lending to declining industries, such as coal mining. In Korea, loan losses were much higher, especially in connection with the overambitious expansion in heavy and chemical industries. The costs of credit intervention were borne by banking institutions, while many of these losses have yet to fully recognized. In India, there were substantial problems with nonperforming loans to state enterprises as well as to rural farmers and small firms. Similar problems also existed in China.

Strategy and Focus. Japan and Korea had clearly formulated strategies for supporting industrialization and export promotion. They both encouraged strong domestic competition and production at internationally competitive levels. Effective mechanisms were created in both countries for communication between government and industry, for establishing common goals, and for sharing risks. In contrast, in China and India, state enterprises faced little domestic competition and domestic enterprises were shielded from international competition through high trade barriers.

B. INGREDIENTS OF SUCCESSFUL CREDIT INTERVENTIONS

The studies undertaken under this project support the claim of Japanese, Korean and other East Asian officials that credit policies can be effective in promoting industrialization and economic development, under certain circumstances. Ten main lessons can be drawn from the experience of these countries. These can divided into two groups, those that reflect "good vision" and those that are associated with "good management".

"Good Vision" Lessons:

1. Credit programs must have a small size and a narrow focus and be of limited duration with clear "sunset" provisions.
2. They must involve a low level of subsidy to minimize distortions in incentives and also to minimize the tax on financial intermediation that all credit programs necessarily entail.
3. They must be financed by long-term funds to avoid inflation and macroeconomic instability. In particular, recourse to central bank credit should be avoided, except in the very early stage of development when selective credit programs supported by central bank credit might help jump-start economic growth and development. But even in these cases, care must be taken to prevent high rates of inflation and loss of macroeconomic stability.
4. They should aim at achieving positive externalities (or avoiding negative ones). Thus, they should focus on overcoming the external finance constraint facing small or rapidly expanding firms as well as on financing firms in declining industries. In the latter case,

credit programs should be accompanied with clear plans to phase-out in an orderly and timely fashion declining industries.

5. They should promote industrialization and export orientation and should be based on a competitive private sector with internationally competitive operations.
6. They should form part of a broader credible vision of economic development, promoting growth with equity, and involving a long-term strategy to develop a sound financial system operating on economic criteria.

"Good Management" Lessons:

1. Policy-based loans should be channelled through well capitalized, administratively capable and autonomous financial institutions. Professional management and managerial autonomy are essential.
2. They should be based on clear, objective and easily monitorable criteria. Detailed project appraisals, close supervision of disbursement, and monitoring of performance and repayment records are key to the success of such programs.
3. They should aim for a good repayment record and low loan losses.
4. They should be supported by effective mechanisms for communication and consultation between the public and private sectors, including the collection of and dissemination of basic market information.

Although bearing in mind these lessons is important, it should be stressed that replicating the Japanese and Korean experience may be more difficult in today's financial environment. The advent of high technology coupled with the globalization of financial markets have substantially reduced the effectiveness of foreign exchange controls on capital movements and have limited the ability of the authorities to set interest rates at substantially below market levels. Moreover, the use of credit policies will become more limited under the new World Trade Organization. But the greater challenge facing other developing countries in using policy-based finance stems from the absence of the very institutional factors ("good vision" and "good management") that explain the success of these policies in Japan and Korea.

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