PN-ABE-503

57524

FINANCING THE EMERGENCE OF SMALL AND MEDIUM ENTERPRISE IN TAIWAN: FINANCIAL MOBILIZATION AND THE FLOW OF DOMESTIC CREDIT TO THE PRIVATE SECTOR

Tyler S. Biggs

E.E.P.A. Discussion Paper No. 15
August, 1988

Prepared for
Employment and Enterprise Development Division
Office of Rural and Institutional Development
Bureau of Science and Technology
U.S. Agency for International Development
Washington, D.C. 20523
Grant No. DAN-5426-C-00-4098-0

The Employment and Enterprise Policy Analysis Project is composed of a consortium of the Harvard Institute for International Development (Prime Contractor), Development Alternatives, Inc., and Michigan State University (Subcontractors). E.E.P.A. provides technical assistance to USAID missions around the world on problems related to employment and small- and medium-scale enterprise development, and performs research on these issues for AID's Bureau of Science and Technology in Washington. For further information on E.E.P.A. contact:

Robert C. Young
Senior Employment Policy Advisor
Agency for International Development
S&T/RD/EED
Room 622, SA 18
Washington, DC 20523

Donald R. Snodgrass
EEPA Project Coordinator
Harvard Institute for
International Development
One Eliot Street
Cambridge, MA 02138

The views and interpretations in this publication are those of the author and should not be attributed to the Agency for International Development or to any individual acting on its behalf.

ABSTRACT

The supply of credit available to small and medium firms depends importantly on the extent of overall financial mobilization and the share of domestic credit flowing to the private sector. So too does the rate of economic growth, which provides smaller enterprises with business opportunities. This paper examines how, in spite of a rigid and moderately repressed financial system, Taiwan achieved remarkable levels of financial mobilization and channeled an extraordinarily large share of domestic credit to the private sector. The major reasons for Taiwan's successes in this area were conservative fiscal policies, inflation controls and positive deposit rates of interest.

CONTENTS

1. Introduction.....1

2. Taiwan's Financial System.....6

2.1 The Structure of Official Financial Institutions.....8

2.1.1 The Commercial Banks and Non-Bank Financial Institutions.....8

2.1.2 Official Money and Capital Markets.....11

3. Interest Rates and Monetary Policy.....13

4. Savings Mobilization and Financial Deepening.....17

5. Access to Domestic Credit.....24

5.1 Sources of Private Enterprise Finance.....26

6. Conclusions.....30

1. Introduction

Promoting small enterprise development is on the agenda of most Third World governments. To foster this development, numerous programs and policies have been initiated, many times with assistance from international aid agencies. Preeminent among these initiatives have been interventions aimed at correcting policy-imposed distortions in financial markets that contribute to small enterprise unequal access to credit.

Much of the concern about how to address perceived financial imbalances between large and small firms centers on two ideas. The first is that because smaller enterprises generally face unequal costs and access to commercial bank credit, "supply-leading" loan programs are necessary to stimulate their participation and growth in industrial development.[1] The second is that liberalization of financial markets is required to ensure adequate flows of financial resources to small and medium enterprise. Without liberalization, it is argued, small firms will be "squeezed out" of formal credit markets by limited credit supplies and by credit rationing.

The notion that supply-leading financial programs are important for small firm development comes from the general perception that many good entrepreneurs inhabit the Third World, with potentially profitable project ideas. Unhappily, start-up and expansion of these small businesses is constrained by access to financial resources at reasonable rates. Special loan schemes, loan guarantees, and the like are advocated to relieve

this putative problem.[2]

The idea that financial liberalization will increase amounts of credit available to small firms stems from indications that regulations restricting financial intermediaries encourage institutions and financial instruments favoring public sector expropriation of increasing amounts of domestic financial resources.[3] The resulting private financial "squeeze" diminishes the supply of domestic credit available to all firms, but to small and medium enterprise especially. Moreover, the repression of interest rates and selective credit controls that generally accompany financial restrictions produces credit rationing and allocative inefficiencies. Credit rationing, because it favors larger firms, inevitably leads to greater industrial concentration (and dualism) and to a less equal income distribution.[4]

The merit of these ideas notwithstanding, it is interesting to ask whether or not financial liberalization and "supply-leading" financial programs have been important in settings where small and medium enterprises have played a prominent role in industrial growth. Was a liberal financial system, with market clearing interest rates and unrestricted, competitive financial institutions influential in promoting growth of small firms in countries where industrial concentration is low, and where and income distribution is equitable? Did supply-leading financial programs provide an important stimulus to small and medium enterprise participation in industrial development?

Taiwan presents an excellent case for examination of these questions. Small enterprises have been exceedingly important Taiwan's industrial success, particularly in export markets. In 1986, Taiwan had almost 115,000 firms. More than 98 percent of which had fewer than 300 employees, and 48 percent of these employed 5 or less workers. What is more, small and medium enterprises produced about 50 percent of value added, exporting most of this to international consumers. The dynamism of small and medium enterprises in Taiwan is also impressive. Between 1966 and 1986, the number of establishments grew 315 percent, while average firm size, measured by the number of employees, increased by only 15 percent. In terms of average industry concentration, Taiwan's is, as would be expected, quite low. The top 50 firms in Taiwan produce only 16 percent of manufacturing output. In fact, enterprises with 500 employees or more actually reduced their share of net value added from 46 percent to 37 percent during the last two decades.[5]

Particularly when contrasted with industrial growth in other semi-industrial developing nations, the contribution of Taiwan's small and medium firms to the country's competitiveness in world markets is remarkable (with, perhaps, the exception of Hong Kong). Contrast Taiwan's firm size structure with Korea's, for example. The structure of Korea's manufacturing growth is a mirror image of Taiwan's. While Taiwan's reported number of firms increased 315 percent over the 1966-86 period and average firm size expanded 15 percent, Korea's average firm size jumped

300 percent and its firms grew in number by only 10 percent.[6] As Scitovsky points out, "...in Korea, development took the more common route."[7]

As yet, no study has tried to link the success of small and medium enterprise in Taiwan with the workings of its financial system. How were all the new business start-ups financed? And where did the funds come from for small enterprise working capital and fixed investment? Most important, how did Taiwan's financial intermediaries deal with the immense transaction costs problems inherent in lending to small enterprises? The lessons from Taiwan's experience should be of interest to all who are looking for answers to the small enterprise financing problem.

The purpose of this paper is to begin the analysis of Taiwan's financial experience by examining the effect of government policy on the mobilization of financial resources and the share of domestic credit allocated to the private sector. Two companion papers will complete the study with an investigation of efficient credit intermediation and the contribution of "supply-leading" selective credit programs to small enterprise finance in Taiwan.

A central conclusion that emerges from this paper is that strict government regulation of intermediaries and repression of interest rates are not always a signpost of diminished capability to mobilize financial resources. Nor is it necessarily a harbinger of constrained flows of domestic credit to the private sector. Taiwan's experience indicates that extraordinarily high

savings rates and extensive financial deepening can occur in a government-owned, heavily regulated and moderately repressed financial system. Critical, however, are government fiscal policies, particularly control of the government budget deficit, and control of domestic inflation, which often go hand-in-hand. As for the share of domestic credit that gets to the private sector, Taiwan's experience indicates that policy-imposed financial distortions and government regulations are only important if government uses them to expropriate increasing amounts of seigniorage. Again, conservative fiscal controls over public expenditures play a very important part in shaping the outcome.

The paper is organized into four sections. The first section examines the nature of Taiwan's financial system - the government regulatory environment and the structure of financial institutions. Section two discusses the history and influence of interest rate policy in Taiwan. With this background, we then look at how financial regulation and government policy influenced the mobilization of domestic savings and the flow of savings into formal financial institutions in section three. Lastly, section four looks at the impact of financial policy and financial mobilization on the share of domestic credit going to the private sector, as well as the sources of private enterprise finance.

2. Taiwan's Financial System

If one word captures the essence of Taiwan's formal

financial system over the last three decades, it is "rigid". Financial institutions, such as banks, have been largely government-owned and strictly regulated, competition from foreign financial intermediaries has been inhibited by the authorities, the operations of non-bank financial institutions have been highly constrained, and interest rates have been strictly government controlled.

The overarching reason for the state's strict control of the financial system has been "the promotion of economic growth with stability".[8] Since the Nationalist government moved from mainland China and took power in Taiwan in 1949, the government has had an abiding obsession with preventing inflation and with limiting the private control of economic resources. In the KMT's analysis, rampant inflation and a small group of inordinately powerful businessmen who controlled the financial system, caused its downfall on the mainland. The KMT has, therefore, on occasion sacrificed speedier growth to the needs of meeting these aims. Accordingly, to prevent inflation, to control the concentration of resources in private hands, and most of all, to promote economic growth, the state runs the financial system as an extension of itself.

Strict government regulation of the financial system in Taiwan has had a profound affect on financial structure. In the presence of pervasive financial phenomena like substitutability and resource fungibility, heavy regulation resulted in a three-way segmentation of the financial system in Taiwan. At one

Table 1: Composition of Financial Assets, Taiwan: 1965-85

(percentage)

	1965	1970	1975	1980	1985
Loans by					
Financial institutions	31.1	28.5	36.7	31.9	33.5
Enterprises and[a] households	19.6	29.0	29.2	30.9	26.5
Govt. agencies	9.7	4.6	1.8	1.5	1.8
Securities					
Government	2.6	2.7	1.0	.6	1.1
Enterprises					
Long-term	35.4	32.3	27.8	28.8	26.8
Short-term	--	--	--	2.1	3.8
Other Domestic assets (net)	1.5	2.9	3.5	4.2	6.5
TOTAL	100.0	100.0	100.0	100.0	100.0

Source: 1) Taiwan Statistical Data book, 1987.
2) Flow of Funds in Taiwan District, the R.O.C. (1965-1985).

a. includes borrowing from and lending to other enterprises, borrowing from and lending to other enterprises, and trade credit (i.e. bills and accounts receivable).

extreme are the banking institutions, subject to heavy government control. At the other are informal, curb market institutions largely out of reach of government regulations that have arisen to substitute for repressed financial services and to arbitrage investible funds misallocated owing to policy-imposed distortions. In between are various types of non-bank financial institutions that have, for the most part, been tightly controlled by the authorities. Inasmuch as the middle's growth has been strongly suppressed, segmentation of Taiwan's financial system is probably most aptly characterized as dualistic. Banking institutions and curb market lenders dominate.[9]

Segmentation of the financial system is illustrated by examining the changing composition of total financial assets in Taiwan over the last two decades (see Table 1). A feature that stands out is the enormous contribution to total financial assets of financial channels outside of official regulation. Informal loans made by enterprises and households (the curb market) in the 1970s and 1980s accounted for almost one-third of domestic financial assets. This was equivalent to all loans made by formal financial institutions. Since the 1960s, cumulative net lending in the curb market has expanded from two-thirds that of regulated channels to roughly equal that of official financial institutions by the 1970s and early 1980s. As we will discuss in later sections, only growth of the official money market since 1975 (short-term securities) has started to reduce the relative importance of unofficial (curb) financial markets.

2.1 The Structure of Official Financial Institutions

2.1.1 The Commercial Banks and Non-Bank Financial Institutions

The structure of the financial system in Taiwan is dominated by the banks. Commercial banks play the major role in providing official credit to the economy. By 1987, domestic banks held more than 60 percent of financial institution assets, down from more than 80 percent in the early 1960s (Table 2).

Unlike most other developing countries (but similar to Japan), the postal savings system is a relatively important financial institution in Taiwan. Its share of financial assets has grown steadily since 1961, until today it accounts for roughly 16 percent. Most of the funds in the postal savings system are deposited in government-regulated specialized banks (mostly the medium business banks). The rest of the assets of the regulated financial system are scattered among the cooperative banks and the five types of nonbank financial institutions. Nonbank financial institutions (investment and trust companies, insurance and securities companies) today account for just over 5 percent of the financial system's assets - much less than the recorded figure in other Asian countries. Korea, for example, saw a remarkable growth in nonbank financial institution assets in the 1970s and early 1980s from 10 percent of GNP to over 40 percent.[10]

Taiwan's regulated financial system can be characterized generally as a specialized system. Although commercial banks

Table 2: Changing Structure of Financial Institutions in Taiwan 1961-1987

(percentage of share of financial institution assets)

	1961	1965	1970	1975	1980	1987
Domestic Banks	83.3	75.5	74.8	70.1	68.0	61.2
Postal Savings	.8	2.7	5.8	6.5	8.3	16.1
Credit Cooperatives	12.7	16.0	13.1	11.7	11.8	14.1
Local Branches of Foreign Banks	.9	2.0	3.0	5.6	5.5	3.0
Investment and Trust Companies	1.3	2.0	1.4	4.7	4.3	2.2
Insurance Companies	.9	1.9	1.9	1.5	1.8	3.0
Securities Companies	--	--	--	--	.4	.4

Source: Financial Statistics Monthly, Central Bank, Taipei, May, 1988.

extend a variety of credits, there are many other lending institutions providing finance in a variety of forms to a diverse group of borrowers. Farmers, for example, are served by 284 credit departments of farmers' associations, as are fishermen by fishermen's associations, and small-and-medium-sized businesses by the eight medium business banks. Other specialized banks include a development bank (the Bank of Communications), two agricultural banks, and an export-import bank. Despite their charters, most of these banks operate like regular commercial banks. Credit cooperatives, for example, are regional institutions that serve members only, accepting deposits, extending loans, and discounting bills. It should be noted that the eight medium business banks serving small and medium enterprise have, since their inception, accounted for only a small share of financial institution assets. Today they represent 4 percent.[11]

Government has had a very restrictive policy on the establishment of financial institutions. With the exception of two small private banks, three of the specialized medium business banks, and one joint-venture bank, all of the domestic commercial banks are strictly limited in their operations, and consequently have never played a very important role in the financial system. As Table 2 shows, foreign banks have even lost ground since 1975.[12]

Since it took over from the Japanese after WWII, the government has maintained ownership and tight control of the

financial system. Unlike Korea, there has been no move to privatize commercial banks over the years. Bank directors and senior managers are appointed by government. Commercial bank chairmen are generally ex-Ministry of Finance or ex-central bank officials. Government also sets salary scales and regulates annual bonuses allowed for staff. Moreover, these powers to appoint and set compensation rates are supplemented by stringent reporting and auditing requirements that go so far as to hold loan officers personally responsible for loan losses.[13] Beyond this, the government establishes bank deposit and loan rates and fixes tight limits on amounts that can be lent to any one borrower and on the purchase of company stocks. One author summed up the management of the banking system this way: "Government ownership in an environment virtually free from competition has meant that banks are generally run as government bureaucracies, carrying out official policy directives."[14]

The upshot of this close government supervision has meant very conservative bank operating procedures. In simple fact, banks have functioned as little more than a chain of pawnshops: three-quarters or more of what they lend must be secured by collateral (so loans have mostly a liquidity function), usually fixed assets (land, machinery and inventory, in that order of acceptance). Administration has been mired in red tape and often inefficiency. And, as bank officials have been collectively responsible for every penny of "the state's money", they have taken few risks; their main objective being to avoid errors and

to advance through the bureaucracy.

Overall, financial administration in Taiwan is shaped by two authorities. The Ministry of Finance is responsible for the formulation of financial regulatory policies and for licensing financial institutions, while the Central Bank is responsible for the conduct of monetary policy and financial regulatory policies. The Central Bank also examines most financial institutions, with the exception of credit cooperatives, which are supervised by the Provincial Cooperative Bank.

2.1.2 Official Money and Capital Markets

The regulated, open money market and the capital markets for corporate stocks and bonds have evolved rather slowly in Taiwan. Until mid-1970, an official money market did not exist. The government had until then no need to issue short-term securities, because it continually ran cumulative budget surpluses. And corporate short-term securities consisted primarily of trade bills secured by commodities or promissory notes secured by corporate stocks or bonds. These instruments were typically discounted at banks.[15]

In December 1975, the government issued a regulation authorizing establishment of bills finance companies. The open money market has grown rapidly ever since from about NT $5 billion in 1976. The total volume of bills sold through the bills finance companies rose to approximately NT $2 trillion in 1984. Commercial paper (50 percent of money market activity), banker's acceptances (30 percent), negotiable CD's (9 percent)

and trade acceptances (3 percent) are the main instruments of bills finance companies. Development of the open money market has increased options for business finance[16], reducing somewhat the importance of the curb market. It has also provided a market-determined interest rate for the authorities responsible for setting official interest rate policy.

In spite of government efforts to promote long-term capital markets, their development has been sluggish.[17] The corporate bond market is very small. Government enterprises have accounted for the lion's share of net borrowing through bond issues (Table 3). Lower relative returns on corporate bonds (particularly when compared to bank deposit rates, which were tax-free), and government's persistent budget surpluses have not helped development of the bond market. Stocks, on the other hand, have done somewhat better, but still represent only a small portion of enterprise financing when compared to bank debt. Today the total value of stocks listed on the stock exchange is equivalent to only about 15 percent of total asset value of financial institutions. Stock market development has been constrained by public distrust of corporate accounting standards and management and by the fact that most enterprises do not want to dilute family control with equity financing. Moreover, the Securities and Exchange Commission has been too understaffed to examine in depth the financial statements of listed corporations.

3. Interest Rates and Monetary Policy

Table 3 Transactions of Capital Markets

in Millions of NT Dollars (%)

Year	Securities		Stocks		
	Total Transactions	Market Share of Capital Market	Total Transactions	Market Share of Capital Market	Number of Companies w/ Listed Stocks
1962	75	14.37	447	85.63	18
1963	67	0.67	9,902	99.33	23
1964	46	0.13	35,501	99.87	31
1965	16	0.15	10,960	99.85	37
1966	53	1.15	4,563	98.85	38
1967	118	2.13	5,429	97.87	38
1968	48	0.62	7,670	99.38	40
1969	152	3.48	4,214	96.52	42
1970	12	0.11	10,866	99.89	42
1971	102	0.43	23,598	99.57	45
1972	144	0.27	54,051	99.73	49
1973	107	0.12	87,091	99.88	62
1974	1,297	2.89	43,586	97.11	64
1975	1,485	1.13	130,337	98.87	68
1976	1,068	0.73	145,941	99.27	77
1977	979	0.57	172,178	99.43	82
1978	1,012	0.28	361,646	99.72	87
1979	1,723	0.83	205,487	99.17	96
1980	1,310	0.80	162,113	99.20	102
1981	404	0.19	209,216	99.81	107
1982	706	0.52	133,877	99.48	113
1983	3,304	0.90	363,845	99.10	119
1984	21,250	6.15	324,476	93.85	123
1985	49,057	20.08	195,228	79.92	127
1986	141,621	17.33	675,655	82.67	130

Source: Financial Statistics Monthly, Taiwan District, R.O.C.", the Central Bank of China.

Bank interest rates in Taiwan have been subject to direct government control, and government has consistently exercised this control as a major monetary policy. Responsibility for setting interest rates has legally been the central bank's. It has been authorized to prescribe an upper limit for bank deposits and to approve a range of rates for bank loans proposed by the bankers' association.

Taiwan's interest rate policy is best known for the way it was used to counteract monetary disruptions. At a time when the conventional wisdom was to keep interest rates low to encourage capital accumulation and growth in developing countries, Taiwan was the first to break new ground by using high real deposit rates to fight inflation.[18] This policy of raising deposit rates (raising the demand for money and bank deposits), as opposed to the usual practice of reducing money supply to fight inflation, has been shown to be an extremely effective stabilization policy under disequilibrium interest rates.[19] As such, the high real deposit rate policy has been maintained in Taiwan for almost three decades (Table 4).[20]

Contrast Taiwan's experience with Korea's (Table 5). Korea adopted a Taiwanese interest rate policy in 1965, but it was short lived. Korea's policy of "forced growth" through involuntary financing by means of the inflation tax dictated a gradual erosion in real deposit rates, shifting returns from savers to investors. From the early 1970s on, real rates declined such that the mean real deposit rate was almost zero for

the 20 year period from 1961.

A striking feature of the Korea-Taiwan comparison is the significance of inflation. In almost every year from the early 1960s, Korea's deposit rates were higher than Taiwan's. Nevertheless, Korean inflation managed to reduce real rates below those of its "gang of four" partner. Although inflation in such a case makes a positive contribution to growth, by forcing the public to reduce its real purchases releasing resources needed for investment, it also has costs. One of the most important was the effect on domestic savings. Korea's low domestic savings rate was an important reason both for its extensive foreign borrowing and its inflationary policies.[21] Taiwan didn't suffer such problems primarily because government managed inflation with fiscal conservatism and interest rates and very restrained use of the inflation tax.

Management of inflation by means of interest rate policy and low public deficits in Taiwan also had other positive effects on the financial system. McKinnon and Shaw both emphasize the influence of low and stable price inflation on the level and efficiency of investment.[22] Variable and unanticipated inflation produces financial portfolio shifts towards short-term investments such as currency and sight deposits, because the liquidity premium rises. It also shifts investment demand towards physical wealth, consumption and foreign assets. Such shifts ten to reduce levels of productive investment and income growth. In addition, inflation uncertainty reduces investment

Table 4 Nominal and Real Deposit Rates of Interest: Taiwan

Year	(1) Deposit Rate[a]	(2) GNP Deflator[b]	(3) Expected Inflation[c]	(1)-(3) Real Deposit Rate
1961	15.6	4.7	4.7	10.9
62	13.9	2.1	2.1	11.8
63	12.6	3.4	3.4	9.2
64	10.9	4.1	4.1	6.8
65	10.8	-0.7	-0.7	11.4
66	10.1	2.7	2.7	7.4
67	9.8	4.4	4.4	5.4
68	9.7	6.6	6.6	3.1
69	9.7	6.2	6.6	3.5
70	9.7	3.4	3.4	6.3
71	9.0	3.0	3.0	6.0
72	8.6	5.7	5.7	2.9
73	8.9	13.9	13.9	-5.0
74	13.4	28.0	28.0	-14.5
75	11.6	2.3	2.3	9.3
76	11.2	5.4	5.4	5.8
77	9.5	6.0	6.0	3.5
78	9.1	4.6	4.6	4.5
79	10.4	10.7	10.7	-0.3
80	11.8	14.9	14.9	-3.1
81	12.7	11.3	11.3	1.4
82	10.2	3.8	3.8	6.4
83	7.2	1.7	1.7	5.6
84	8.0	0.9	0.9	7.1
85	7.7	0.2	0.2	7.5

[a] Deposit Rate: continuously compounded nominal 12-month time deposit rate of interest.

[b] GNP Deflator: continuously compounded rate of change in the GNP implicit price deflator.

[c] Expected Inflation: estimated from polynominial lag distributions shown in Fry, pp. xi- 17.

Source: Fry, M.J. (1988), op. cit. pp. xi-16.

Table 5 Nominal and Real Deposit Rates of Interest: Korea

Year	Deposit Rate[a]	GNP Deflator[b]	Expected Inflation[c]	Real Deposit Rate
1961	11.6	12.9	8.7	2.9
62	14.0	16.7	8.4	5.6
63	14.0	26.0	13.4	0.0
64	14.0	26.2	18.7	-4.7
65	16.4	6.1	17.6	-1.2
66	23.4	13.3	17.6	5.9
67	23.4	14.7	17.1	6.3
68	23.2	14.8	15.0	8.2
69	21.3	13.6	12.6	8.8
70	20.5	14.6	14.2	6.3
71	19.6	11.5	13.8	5.7
72	13.9	14.5	13.8	0.1
73	11.3	12.4	13.3	-2.0
74	13.8	25.9	15.9	-2.1
75	14.0	22.0	17.4	-3.4
76	14.4	16.3	18.3	-3.9
77	14.6	15.1	18.3	-3.7
78	15.4	18.7	19.6	-4.1
79	17.1	17.6	17.9	-0.9
80	20.6	23.0	18.2	2.4
81	17.6	15.0	17.9	-5.9
82	10.4	7.4	16.3	-5.9
83	7.7	3.0	13.0	-5.3
84		3.9	14.0	

Source: Fry, M.J. (1988) op. cit., pp. xi-16.

efficiency.[23] It tends to increase the dispersion of expected inflation, thereby raising the dispersion of views about what the real rate of interest is going to be. This divergence in views increases the dispersion in the estimates of real rate of interest is going to bee. This divergence in views increases the dispersion in the estimates of rates of return on various projects, which can reduce investment efficiency. Lastly, effective inflation management insures that real effective exchange rates do not appreciate as a result of domestic inflation. This is a crucial element in successful export-led growth strategies, particularly where small and medium firms are concerned.

Though Taiwan maintained a high deposit rate policy, this did not mean that official interest rates were set at equilibrium levels. Throughout the period of the 1960s and 1970s, official rates were repressed at levels well below the natural rate that would clear the market. A large gap between official loan and deposit rates and curb market rates is evidence of this disequilibrium (Tables 6 and 7). For most of three decades, curb market rates (loans and deposits) have been two to three times official rates.[24] The higher return in curb markets, despite the increased risks, caused a diversion of savings into the unregulated financial market. Many savers diversified their portfolios by putting part of savings into secure, inflation hedged, government insured and tax exempt bank savings accounts and part into the higher return, higher risk curb market.

Indeed, the data in Table 1 support this conclusion. Curb market assets grew from 20 percent of total domestic financial assets in 1965 to more than 30 percent in 1980. This indicates a very large diversion of savings from regulated financial institutions to the curb market.

Interest rates in Taiwan have also been used since the 1950s to facilitate concessional selective credit programs. Exporters, "strategic industries", and others have, through special discount windows at the central bank, received bank loans at less that general loan rates. Table 6 indicates that in the 1960s, the central bank subsidized the financing of exports at about 50 percent of the general loan rate. Thereafter, the subsidy on export financing declined until it disappeared in the early 1980s. As we will discuss in later sections of this paper, access to such loans was not automatically extended to all exporters, as it was in other export-oriented countries like Korea (see Table 8). Hence, the subsidy element of these programs in Taiwan was limited.

With the addition of special interest rates for selective credit programs, hypothetically, a three-tiered credit market emerged. At the top were those such as exporters that could get special subsidized interest rates, in the middle were other privileged borrowers - mostly larger firms- that paid the bank general loan rates, and on the bottom were the majority of small and medium companies that had to seek relatively high-cost finance in the curb markets. In reality, however, the three

Table 6 Nominal and Real Loan Rates of Interest at Commercial Banks: Taiwan

Year	(1) General Loan*	(2) Export	(3) GNP Deflator	(4) Expected Inflation	(1)-(4) Real Loan Rate
1952-62	20.9	11.2	10.5	10.5	10.4
63	16.4	7.5	3.4	3.4	13.0
64	15.8	7.5	4.1	4.1	11.7
65	15.8	7.5	-0.7	-0.7	16.5
66	15.5	7.5	2.7	2.7	12.8
67	14.0	7.5	4.4	4.4	9.6
68	14.0	7.5	6.6	6.6	7.4
69	13.2	7.5	6.2	6.2	7.0
70	12.5	7.5	3.4	3.4	9.1
71	12.5	7.5	3.0	3.0	9.5
72	11.7	8.5	5.7	5.7	6.0
73	13.7	9.7	13.9	13.9	-0.2
74	15.5	11.0	28.0	28.0	-12.5
75	13.8	7.5	2.3	2.3	11.5
76	12.5	7.0	5.4	5.4	7.1
77	11.2	6.5	6.0	6.0	5.2
78	11.2	6.5	4.6	4.6	6.6
79	14.2	10.5	10.7	10.7	3.5
80	14.2	10.5	14.9	14.9	-0.7
81	13.0	11.0	11.3	11.3	1.7
82	9.0	8.2	3.8	3.8	5.2
83	8.5	8.0	1.7	1.7	6.8
84	8.0	7.7	0.9	0.9	7.1
85	6.2	6.2	.2	.2	6.0
86	5.0	5.7	.2	.2	4.8

* Short-term Loans

Source: Financial Statistics Monthly, Central Bank, Taipei, 1983 and 1987 and Fry, op. cit. (1987).

Table 7 Nominal Curb Market Interest Rates on Various Loans and Deposits: Taiwan

Year	Loans Against Postdated Checks	Unsecured Loans	Deposits with Firms
1952-62	--	41.1	--
1963-69	23.0	25.0	--
70	22.6	24.6	21.1
71	22.3	23.9	20.5
72	23.2	24.1	20.2
73	24.3	24.8	21.0
74	32.8	33.5	25.9
75	28.9	29.5	22.7
76	29.3	30.3	23.8
77	28.5	29.4	22.3
78	28.2	29.1	21.4
79	32.6	33.7	23.3
80	34.6	35.7	25.6
81	34.6	35.9	26.5
82	31.1	32.5	23.6
83	28.7	30.3	22.4
84	27.4	29.2	21.1
85	26.2	27.4	19.6
86	23.0	24.3	16.1

Source: Financial Statistics Monthly, Central Bank, R.O.C. Data based on inquiries conducted by three commercial banks with 150 firms in Taipei City. And H.S. Cheng, op. cit.

Table 8 Nominal and Real Loan Rates of Interest at Commercial Banks and on Curb Markets: Korea

Year	(1) General Loan	(2) Export	(3) GNP Deflator	(4) Expected Inflation	(1)-(4) Real Loan Rate	(6) Curb Rate
1966	24.0	6.5	13.3	17.6	6.4	
67	24.0	6.5	14.7	17.1	6.9	
68	26.0	6.5	14.8	15.0	11.0	
69	24.6	6.0	13.6	12.6	12.0	
70	24.0	6.0	14.6	14.2	9.8	
71	22.0	6.0	11.5	13.8	8.2	
72	19.0	6.0	14.5	13.8	5.2	
73	15.5	6.0	12.4	13.3	2.2	
74	15.5	9.0	25.9	15.9	-0.4	40.6
75	15.5	9.0	22.0	17.4	-1.9	41.3
76	18.0	8.0	16.3	18.3	-0.3	40.5
77	16.0	8.0	15.1	18.3	-2.3	38.1
78	19.0	9.0	18.7	19.6	-0.6	41.2
79	19.0	9.0	17.6	17.9	1.1	42.4
80	20.0	15.0	23.0	18.2	1.8	44.9
81	17.0	15.0	15.0	17.9	-0.9	35.3
82	10.0	10.0	7.4	16.3	-6.3	30.6
83	10.0	10.0	3.9	14.0	-2.5	24.8

Source:

tiers tended to merge because of the robust fungibility of financial resources in Taiwan, facilitated by the active curb markets. Borrowers that could get access to official credit were rewarded with subsidies. But the opportunity cost of capital was determined by the curb market rate (more on this point later).

There were cautious attempts by the authorities, beginning in the mid-1970s and again in the early 1980s, to move towards interest rate liberalization. Most of the changes that were made, however, turned out to be relatively insignificant. More flexibility in rate setting occurred, but the central bank continued to prescribe overall ceiling rates.

In the end, nominal interest rate ceilings established in Taiwan were not as destabilizing as they might have been. Government's management of inflation significantly reduced the possibility of destabilizing portfolio shifts and the worst effects of financial repression. As Fry points out, "typically it seems, financial repression is the unintended consequence of low, fixed nominal interest rates combined with high and rising inflation."[25]

4. Savings Mobilization and Financial Deepening

Despite its rigidly regulated financial sector and controlled interest rates, Taiwan achieved an unprecedented increase in domestic savings and remarkable success in financial deepening. Consider first Taiwan's ability to mobilize savings.

Three decades of rapid economic growth and impressive

economic transformation in Taiwan owe much to an unprecedented rise in domestic savings and to the productive use of these savings for domestic capital formation (see Table 9). Savings increased from 9 percent of GNP in the 1950s to more than 30 percent in the 1970s. Taiwan, by the mid-1970s, had the highest net savings as a percentage of national income of any country in the world, surpassing even that of Japan by 1976. By comparison, Korean savings, as a percentage of national income, averaged about 17 percent in the 1970s and early 1980s - a level similar to that achieved in the Philippines and Thailand.

Equally impressive has been Taiwan's ability to translate these high savings rates into extraordinarily high levels of gross capital formation. Again, as a percentage of GNP, Taiwan's gross domestic capital formation over the last thirty five years attained the highest sustained levels probably ever achieved - averaging about 27 percent over the 1960-86 period. Most notable is the fact that these remarkable investment levels were financed entirely from domestic savings. Other high-investing, fast growing countries, such as Korea and Singapore, relied to a much greater degree than Taiwan did on foreign aid and foreign loans to finance domestic investment (see Table 10). As the evidence suggests, no Asian country, even the slower growing countries, could match Taiwan's ability to fund capital formation domestically.

Why has Taiwan's aggregate domestic savings rate been so high? Studies of savings behavior in Taiwan seem to agree that

Table 9 Real Output Growth and Savings and Investment Ratios*

(Market Price)

Year	Real Output Growth Rate	Savings	Gross Domestic Capital Formation
1952-59	8.3	9	18
1960-69	9.2	18	24
1970-79	10.2	31	32
1980-86	6.8	33	23

* Ratios to GNP

Source: Taiwan Statistical Data Book 1987 (CEPD)

standard economic explanations provide only part of the reason for the high savings rate. Sun and Liang find in their analysis of savings behavior, for example, that absolute income and growth rates of income explain only a portion of the phenomenal rise in average propensity to save from 1953-80.[26] Likewise, the distribution of income between entrepreneurial and wage income was shown to have little affect on long-run secular trends in savings. What Sun and Liang did find important, however, were government fiscal policy and the Chinese cultural propensity to save.

The influence of government is made clear if we look at the component sources of net savings in Table 11. What stands out is the contribution of government to national savings. By international standards, government savings in Taiwan have been extraordinary (Table 12).[27]

High government savings reflect two factors. First, the government has followed a very conservative fiscal policy, aggressively marshalling revenues and managing expenditures. Since the early 1960s, the budget has regularly been in surplus. In the 1950s and early 1960s, it was the agricultural surplus and foreign aid that provided the revenue base; after that industry played an increasing role. But government has also been fiscally frugal. Notwithstanding relatively heavy expenditures on <u>defense</u> (averaging 25 percent of the government budget, which was 10 percent higher than the world average), on <u>education</u> (averaging 20.5 percent of the budget; 15 percent above world

average), and infrastructure (averaging 17 percent of the budget; 6 percent above world average), government limited overall budget outlays by lowering expenditures on expensive social programs (averaging 16 percent of the budget; 15 percent below world average) and on monument building (many government offices, for example, are located in downtown buildings in Taipei).[28] Second, public enterprises in the aggregate managed to make substantial profits. Beginning in the late 1950s, undistributed profits of public corporations and government enterprises provided a substantial amount of government's contribution to national savings.[29]

For the most part, the origins of savings data indicate that a continuous shift took place in Taiwan from forced government saving in the 1950s and early 1960s to voluntary private savings thereafter. Only in the mid-1970s did government savings rise somewhat due to increased investments in public projects.

Besides decisions about its own revenues and expenditures, and about the management of public enterprise, government had other influences on savings behavior, particularly voluntary household savings. Public policies towards real deposit rates, taxes, and bank regulation have all had some impact. High real deposit rates both as a weapon against inflation and as an inducement for savers to deposit funds in savings accounts have encouraged higher real savings. Just how important the deposit rate has been, however, is a matter of some controversy.[30] So have tax policies which exempt earnings on savings deposits (up

Table 10 Gross National Saving as a Percentage of Gross Domestic Capital Formation 1971-82

	1971-76	1977-82	1971-82
Bangladesh	17a	40	36b
Burma	94	71	75
Taiwan	99	109	106
India	99	95c	96d
Indonesia	88	93	92
Korea (South)	76	76	76
Malaysia	85e	74	77f
Pakistan	57	72	68
Philippines	85	79	81
Singapore	66	80	75
Sri Lanka	--	50	--
Thailand	91	70	76

Not Available:
a) 1973-76
b) 1973-82
c) 1977-81
d) 1971-81
e) 1973-76
f) 1973-81

Source: Graham Abbott "National Saving and Financial Development in Asian Developing Countries", Asian Development Review, Vol. 2, No. 2, 1984.

Table 11 Origin of Net National Savings in Taiwan (Percentage)

Year	Households and Non-profit Institutions	Private Corporations(a)	Government and Public Corporations(b)
1952-59	33	13	54
1960-69	55	10	35
1970-79	53	8	39
1980-85	57	6	37

a. Undistributed profit of private corporations.

b. Saving of general government (Fcentral and local) plus undistributed profit of public corporations and government enterprises.

Source: National Income in Taiwan Area, the R.O.C. Director General of Budget, Accounting and Statistics, Executive Yuan, December, 1986.

Table 12 Distribution of Savings by Sector for 7 Selected Countries

(Average for 1960-85)

	Households and Non-profit Institutions	Private Corporations	Government and Public Corporations
France	73.3	7.5	19.0
Germany (FRG)	64.7	13.3	22.1
Japan	71.8	8.6	19.7
Korea (Rep. of)	40.8	20.6	34.9
Philippines	62.7	15.6	21.6
United Kingdom	80.7	19.2	0.2
United States	90.8	23.5	-13.7

Source: United Nations, Yearbook of National Accounts Statistics, 1979

to a high ceiling amount). And government efforts to create a dense network of banking offices, as well as an active Japanese-like postal savings system (with higher than bank interest rates), which make it easy for savers to deposit funds in government insured accounts.

The influence of culture on the propensity for high household savings in Taiwan comes in several forms: "frugality" sanctioned by Chinese culture, the large portion of the population saving to establish small independent business or to enlarge the more numerous already-established small businesses, and the large proportion of families saving for heavy investments in children's education.[31] All these factors seem to be characteristic of Chinese culture in most places. But of equal importance may be several other non-cultural determinants which have been shown to influence savings in other high saving Asian countries such as Japan: the underdeveloped social security system, prevailing methods of compensating workers, and the need to save more for housing purchases.[32]

Lastly, it should be noted that up to the mid-1960s, foreign savings also played a significant role in savings and investment in Taiwan. In the 1950s, foreign savings accounted for about 40 percent of total savings, coming mostly in the form of U.S. foreign aid. By 1965, however, this aid ended.

Rapid growth of domestic savings in Taiwan has been accompanied by a marked increase in financial deepening. Growth of recorded financial assets over the last several decades has

been many times faster than output growth. In nominal terms, domestic financial assets grew an average of 22 percent per year from 1965 to 1985 (Table 13), so that by 1985, real domestic financial assets per person were eight times larger than in 1965. Compared with the exceptionally high per capita output growth over the same period, per capita real financial assets grew almost twice as fast; albeit on a somewhat declining trend.

It is this comparatively faster growth of monetary assets versus output that is the essence of financial deepening. But expanded financial markets and instruments to serve a wider range of customers more efficiently is also a fundamental element in financial development. Here, as we have seen, Taiwan has not progressed as far. Growth of recorded financial assets went with little diversification of financial markets. It is argued by some that the financial regulations and restrictions limiting financial diversification may have helped get money into banks by constraining the choice among financial instruments and controlling foreign capital outflows.[33] There may be some truth to this assertion. However, it should be balanced with the evidence that restricted development of financial markets in Taiwan has also been responsible for growth of a large and active unregulated financial sector, as curb lenders have moved to substitute for restricted financial services and to accommodate rationed borrowers. This has caused a diversion of assets away from regulated financial institutions and a reduction in recorded financial deepening ratios. In any case, it is clear that the

Table 13 Growth of Domestic Financial Assets 1965-85: Taiwan
(Avg. annual growth rates between periods %)

	1965	1970	1975	1980	1985
Domestic Financial					
Assets		22.2	26.4	24.6	13.8
Population		3.1	1.9	2.0	1.5
GDP Deflator		4.2	12.4	9.7	3.9
(1) Per capita real domestic financial assets		14.9	12.1	12.9	8.4
(2) Per capita real output		7.8	6.0	7.9	4.6
Ratio (1)/(2)		1.9	2.0	1.6	1.8

Source: Flow of Funds in Taiwan District, The R.O.C. (1965-1985) and Taiwan Statistical Data Book, 1987 and Cheng, H.S. "Financial Policy and Reform in Taiwan, China" in Financial Policy and Reform in Pacific Basin Countries, Federal Reserve Bank of San Francisco, 1986.

Table 14 Financial Deepening Ratios for Several Asian Countries
(ratio of M2 to GNP)

	1955	1960	1965	1970	1975	1980
Taiwan	11.5	11.6	33.4	41.1	56.4	65.0
Philippines	----	18.6	21.4	23.5	18.6	21.9
Indonesia	10.5	----	11.3	10.0	16.9	18.6
Sri Lanka	----	28.4	33.0	27.5	25.5	31.7
Thailand	23.2	26.8	26.3	33.9	34.6	37.4
India	----	28.3	26.2	26.4	29.5	38.2
Malaysia	42.7	36.5	28.0	35.9	46.3	53.2
Japan	25.4	73.7	70.1	86.3	102.6	139.0
South Korea	6.9	11.4	10.2	32.5	32.3	38.7
Singapore	----	----	54.2	70.1	66.8	82.6

Source: 1) IMF Statistics (Various issues)
2) Taiwan Statistical Data Book, 1987

factors contributing to Taiwan's success in mobilizing real savings also contributed to channeling resources into financial institutions, particularly, government policies that held down inflation, that established government insured, inflation hedged savings accounts, and that set up dense networks of banks and postal savings offices.

Contrasting Taiwan's financial deepening performance with the rest of Asia's shows that only Singapore and Japan had a larger rise in intensity of money holding relative to overall economic activity, as measured by the M_2/GNP ratio (Table 14). Korea, on the other hand, fell far short of Taiwan, while the Philippines actually went backwards after 1970 and Indonesia progressed only slowly. Korea's less than spectacular performance in mobilizing domestic savings and in getting savings into the banking system was an important reason why she had to borrow heavily from abroad to finance domestic capital formation, particularly when economic adjustments were called for in the oil shock period of 1973-1980.

Taiwan's remarkable ability to mobilize savings and to expand the intensity of money holding in financial institutions underscored an important proviso that should be added to the financial liberalization literature. It is clear that focusing on rigid financial regulations and controlled, interest rates as a cure for savings and financial deepening ills is far too narrow. Taiwan's experience indicates that policy-makers have a fair amount of leeway when it comes to financial restrictions and

interest rate management, as long as government tightly restricts its fiscal deficits and limits inflation. It could be argued, in fact, that control over public finances was the most crucial factor in Taiwan's financial development experience. Government fiscal conservatism helped directly and indirectly to mobilize domestic savings, and through its impact on inflation, which in turn made it easier to maintain positive real deposit rates, helped to channel resources into financial institutions.

Recently, the financial development literature seems to be coming around to this view. McKinnon has stressed, for example, control over public finances as a prerequisite for successful financial liberalization, as government deficits are invariably financed by taxing the domestic monetary system in one way or another.[34] This is seconded by Fry who states: "The importance of good fiscal policies is that they are prerequisites for good monetary and financial policies in almost all developing countries."[35]

5. Access to Domestic Credit

While the state has strictly controlled financial intermediaries and interest and exchange rates, it did not exercise this control, as did governments of so many other developing countries, to expropriate increasing amounts of seigniorage.[36] From the early 1960s on, increasing amounts of the growing supply of domestic credit went to accommodate demands of the private sector.

Conservative fiscal policy in Taiwan meant that the real cost of financial restriction - "squeezing out" private sector credit demands - never materialized, as conventional wisdom would have predicted. Financial restriction in Taiwan was not accompanied by high bank reserve requirements and the usual obligatory holdings of government bonds used in other countries to facilitate transfer of a continuing flow of funds from the financial system to the public sector. Government did not require increasing amounts of resources to finance huge public sector deficits.

In the early development years of the 1950s, the state used its control over financial markets and tax revenues to channel investible funds to construction of social overhead capital and to the formation of new, basic (some publicly held) industries. This was encouraged by USAID, which concentrated about half of its capital assistance on infrastructure (electric power, transportation, communication, and public works) and the remainder on helping extant public and private enterprises and several new ones.[37] But after this initial phase, more and more financial resources went to the private sector, as Table 15 indicates. By the mid-1960s, 70 percent of domestic credit was flowing into the private sector and this increased to more than 80 percent in the early 1970s.

Comparatively, the sustained share of domestic credit allocated to the private sector in Taiwan has been among the highest in the developing world.[38] And, given the high

correlation between the share of domestic credit flowing to the private sector and the level and efficiency of aggregate investment, this unquestionably had an enormous impact on Taiwan's rate of economic growth.

5.1 Sources of Private Enterprise Finance

Rapid rates of real output growth since the early 1960s have meant that a large portion of enterprise finance has come from accumulated profits, particularly in the case of small and medium enterprises. Surveys indicate that on average, about 45-55 percent of investment was financed from internal sources during this period.[39] In smaller firms with limited access to the formal financial system, internal financing has been even more important, our surveys indicate that internal financing upwards of 60 to 65 percent of investment. this points up the important fact that in fast growing economies, the existence of sufficient profits for self-financing significantly reduces the need for institutional credit for smaller enterprises.

As real domestic financial assets grew much faster than real output, and the private sector realized the lion's share of domestic credit, the real private sector lending capacity of the monetary system grew enormously, making possible a huge expansion in the base from which credit expansion could proceed. The actual sources of these external funds for private enterprise were, however, conditioned by the distorted evolution of the financial system due to the regulatory environment. Indirect finance has been the most important source of investible

resources, providing on average a little more than 50 percent of external enterprise funds over the 1964 to 1985 period. As in other East Asian countries, such as Korea and Japan, the main source of indirect finance has been the commercial banks (see Table 16). By the early 1980s, banks were still providing more than 47 percent of the external funds of private firms (public enterprises obtain 95 percent of their finances from banks). Government restrictions in Taiwan, as we discussed earlier, have inhibited the growth of non-bank financial institutions such that by the 1980s, only 5.6 percent of enterprise finance came from this source. This has not been the case in Korea where the contribution of non-bank financial institutions increased dramatically, reflecting the government's more liberal attitude towards this subsector. In both Korea and Taiwan, direct government loans played only a minor role in private enterprise finance. But this is not the only indication of Government's role in allocating bank credit in either country, as we will point out later on.

In the last two decades, direct financing has increased somewhat in Taiwan - from about 15 percent of the total to 22 percent. Most of this increase comes from growth of the regulated money market since 1976. In fact, the money market as a source of external funds for private enterprise, has been developing much faster in Taiwan than in Korea. On the other hand, stock and bond markets in Taiwan have not grown much, whereas, in Korea, they have developed more rapidly.

Table 15 Share of Private Sector in Domestic Credit: Taiwan
(% Share)

Year	Private Sector	Private Enterprises	Individuals & Others	Gov't Enterprises	Gov't Agencies
1961	56.4	44.71	11.72	37.30	6.27
62	56.2	42.77	13.44	39.01	4.78
63	64.2	45.85	18.39	29.68	6.07
64	67.3	51.06	16.24	26.45	6.25
65	70.7	58.70	12.00	22.38	6.92
66	73.3	60.29	13.03	21.47	5.22
67	74.1	60.99	13.11	20.20	5.69
68	77.4	65.37	12.00	17.37	5.26
69	77.7	66.25	11.42	17.12	5.21
70	77.5	65.95	11.60	17.65	4.80
71	77.1	64.13	12.93	18.68	4.26
72	79.0	66.89	12.07	17.30	3.74
73	83.0	69.11	13.85	14.68	2.36
74	79.8	70.85	8.96	18.39	1.80
75	78.0	67.96	10.02	20.23	1.79
76	77.1	65.62	11.47	20.81	2.09
77	76.7	61.5	15.16	21.08	2.23
78	78.9	60.45	18.49	18.38	2.68
79	77.0	55.87	21.14	20.59	2.40
80	73.5	50.89	22.65	24.38	2.09
81	72.2	50.25	21.96	25.23	2.56
82	70.6	46.42	24.14	25.45	3.98
83	72.7	46.18	26.50	23.35	3.97
84	76.4	47.15	29.25	20.41	3.20
85	78.1	43.69	34.43	18.72	3.16
86	80.3	40.62	39.67	16.58	3.13

Source: Financial Statistics Monthly, Taiwan District, ROC, Economic Research Department. The Central Bank of China.

Note: All the figures are the outstanding balance at the end of the year.

Table 16 External Funds of Private Enterprise Sector in Korea and Taiwan 1965-84
(million Won and NT)
(percentages in parenthesis)

	1965-69		1970-74		1975-79		1980-84	
	Korea	Taiwan	Korea	Taiwan	Korea	Taiwan	Korea	Taiwan
Indirect Financing	87.8 (47.4)	115.0 (54.2)	391.2 (55.9)	419.8 (61.3)	1885.7 (56.5)	1119.9 (54.7)	5284.4 (53.0)	2555.5 (47.9)
Borrowing from financial institutions	87.8 (47.4)	108.4 (51.1)	387.9 (55.4)	413.0 (60.3)	1883.7 (56.5)	1106.6 (54.1)	5001.8 (50.2)	2534.2 (47.4)
Banks	69.5 (37.5)	101.4 (47.8)	282.8 (40.4)	370.5 (54.1)	1197.9 (35.9)	981.7 (48.0)	2372.9 (23.8)	2235.3 (41.9)
Non-banks	18.3 (9.9)	7.0 (3.3)	105.1 (15.0)	42.5 (6.2)	685.8 (20.6)	124.9 (6.1)	2628.9 (26.4)	298.9 (5.6)
Government Loans	-- (--)	6.6 (3.1)	3.3 (0.5)	6.8 (1.0)	2.0 (0.1)	13.3 (0.6)	282.6 (2.8)	21.3 (0.4)
Direct Financing	27.1 (14.6)	24.2 (11.4)	145.3 (20.8)	52.3 (7.6)	767.9 (23.0)	292.1 (14.3)	4083.7 (41.0)	1198.3 (22.4)
Stock	26.4 (14.3)	22.8 (10.7)	124.6 (17.8)	48.9 (7.1)	458.0 (13.7)	211.2 (10.3)	2059.3 (20.7)	559.6 (10.5)
Bonds	(0.7) 0.4	1.4 (.7)	12.0 (1.7)	3.4 (.5)	216.5 (6.5)	9.7 (.5)	1441.9 (14.5)	31.7 (.6)
Money Market	-- (--)	-- (--)	8.7 (1.2)	-- (--)	93.4 (2.8)	71.2 (3.5)	582.5 (5.8)	607.0 (11.4)
Foreign Debts	70.2 (37.9)	5.1 (2.4)	163.3 (23.3)	11.1 (1.6)	681.1 (20.4)	14.7 (.7)	601.6 (6.0)	29.5 (.5)
Unorganized Financial Market Loans	-- (--)	68.2 (32.1)	-- (--)	202.0 (29.5)	-- (--)	620.2 (30.3)	-- (--)	1554.4 (29.1)
Total	185.2 (100.0)	212.1 (100.0)	699.8 (100.0)	685.2 (100.0)	3334.7 (100.0)	2046.9 (100.0)	9969.7 (100.0)	5337.7 (100.0

Source: Table 19 and Cho, Y.J. and Cole, D.C. "The Role of the Financial Sector in Korea's Structural Adjustment", Harvard Institute for International Development, DDP #230.

Where Taiwan differs substantially from its East Asian rival is the amount of private enterprise foreign debt and the significance of unorganized, curb markets in domestic financial activity. In Taiwan, private enterprise foreign debt never amounted to more than 2.4 percent of total funding in the late 1960s, declining to .5 percent in the 1980s. By contrast, Korean private enterprises borrowed almost 40 percent of their external funds from foreign sources in the late 1960s. Over the last two decades, however, foreign loans have declined rapidly in Korea. By the early 1980s, foreign loans represented only 6 percent of private enterprise external finance.

Informal, unregulated financial markets have been an enormously important source of external funds for Taiwanese firms. Curb market loans from enterprises and households (friends and relatives) averaged more than 30 percent of firm external finance over the last two decades (Table 17). And if trade credit is added to informal financial transactions, as it should be, the figure is raised to more than 50 percent. Unfortunately, there are no comparable data for Korean firms. Some evidence suggests, however, that curb market finance in Korea has also been a significant source of enterprise finance.[40] Estimates range from 20 to as much as 50 percent of commercial bank lending.[41]

The historically large share of bank credit (and the smaller amount of foreign credit and government loans) in the external funding of private enterprise in Taiwan means that the government

has had, potentially, significant control over the allocation of investible resources to the business sector. This control has declined to some degree since 1965 - from 53.3 percent to 42.8 percent - but remains substantial. Contrasting this with the Korean situation, we see that the share of government controllable funds to enterprises (bank credit, foreign loans and government loans) has declined 42.8 percent (to 32.6 percent) since the late 1960s. The difference is that non-bank credits and direct finance have been allowed to grow more rapidly in Korea.

6. Conclusions

The important conclusion that emerges from this examination of Taiwan's experience with financial mobilization is that government regulation of the financial system and financial repression do not matter as much as the current conventional wisdom would have us believe. In spite of a rigidly regulated financial system and modest financial repression, Taiwan was able to mobilize a remarkable amount of financial resources and allocate the largest portion of these domestic resources to private entrepreneurs. Probably the most critical aspects of policy that made this possible were government's conservative position on public expenditures and government's unrelenting efforts to control inflation.

Government regulation of the financial system did, however, distort the structural evolution of financial intermediaries. The heavy hand of government on banks and non-bank financial

institutions caused the rise of informal financial intermediaries, which resulted in a dualistic financial structure. The effect of this two-way segmentation of the financial system on efficient credit intermediation is the subject of the Employment and Enterprise Policy Analysis Project's Discussion Paper Number 16.

Table 17 Domestic Source of External Funds for Private Enterprise[1]
(in Millions of NT $)

	Financial Institutions[2]		Gov't Loans[3]		Foreign Loans		Money Market[4]		Capital Market: Bonds		Capital Market: Stocks[5]		Unorganized Market: Loans[6]		Unorganized Market: Trade Credit[7]		Total With Trade Credit[8]
Year	Amount	Share	Amount	Share	Amount	Share	Amount	Share	Amount	Share	Amount	Share	Amount	Share	Amount	Share	
1964	8116	40.1	871	4.3	--	--			120	.6	3595	17.8	7524	37.2	8335	29.2	28561
1965	11223	43.0	938	3.6	420	1.6			140	.5	4833	18.5	8874	34.0	10802	29.3	36872
1966	14[illegible]4	44.8	1022	3.1	383	1.2			--	--	4306	13.2	12331	37.7	14182	30.2	46898
1967	22950	53.7	1630	3.8	1115	2.6			350	.8	3594	8.4	13072	30.6	31758	42.6	74469
1968	29122	55.2	1689	3.2	1115	2.1			480	.9	4705	8.9	15671	29.7	38798	42.4	91580
1969	30439	52.6	1282	2.2	2061	3.6			480	.8	5369	9.3	18222	31.5	50197	46.4	108050
1970	36625	53.2	1244	1.8	2477	3.6			480	.7	5915	8.6	22047	32.0	61933	47.4	130701
1971	59574	56.5	1426	1.3	2105	2.0			580	.5	6390	6.1	35267	33.5	86967	45.2	192309
1972	76784	62.6	1197	1.0	1083	.9			630	.5	7395	6.0	35623	29.0	96793	44.0	219685
1973	104997	60.9	1307	.8	2356	1.4			560	.3	12135	7.0	50924	29.6	149191	46.4	321470
1974	135024	62.5	1680	.8	3121	1.4			1150	.5	17033	7.9	58126	26.9	172971	44.4	389105
1975	159258	60.6	3089	1.2	1300	.5			1225	.5	21801	8.3	76129	29.0	188092	51.7	450903
1976	184128	58.6	3410	1.1	2680	.8	1561	.5	1700	.5	32633	10.4	87914	28.0	214401	40.6	528427
1977	197330	53.2	2585	.7	1965	.5	9174	2.5	1940	.5	41282	11.1	116859	31.5	246228	40.0	617363
1978	252596	52.2	1629	.3	4207	.9	16611	3.4	2230	.5	51176	10.6	155584	32.1	308483	38.9	792516
1979	313311	50.9	2624	.4	4547	.7	43819	7.1	2600	.4	64276	10.4	183753	29.9	369098	37.5	984028
1980	401015	46.8	2584	.3	5966	.7	63352	7.4	3750	.4	81494	9.5	297639	34.8	451422	34.5	1307272
1981	432985	43.9	2525	.3	5530	.6	98169	10.7	4200	.5	96298	10.5	273857	30.0	542314	37.2	1455878
1982	506607	48.0	4236	.4	4084	.4	122777	11.6	4650	.4	113604	10.8	299471	28.4	503338	32.3	1558767
1983	574119	48.4	2614	.2	5972	.5	148374	12.5	6839	.6	125372	10.6	321846	27.1	594048	33.4	1779184
1984	619443	46.6	9319	.7	7942	.6	174375	13.1	12285	.9	142796	10.7	361590	27.2	688870	34.2	2016620
1985	669707	46.	12269	.8	13558	.9	168107	11.7	12520	.9	160086	11.1	404625	28.1	683462	32.2	2124334

1. Summary of year-end outstanding amount of liabilities.
2. Includes commercial banks.
3. Sino-American Development Fund and others.
4. Includes commercial paper and domestic bills accepted by banks.
5. Par value of listed stocks excluding public enterprises.
6. Borrowing and lending from other enterprises plus borrowing from and lending to households.
7. Includes bills and accounts receivable.
8. The shares of each financial subsector are calculated without trade credit. The share of trade credit is calculated using the expanded total for domestic credit.

ENDNOTES

1. The term comes from Hugh Patrick's "Financial Development and Economic Growth in Underdeveloped Countries," EDCC, Vol. XIV, No. 2, January, 1966.

2. Witness the recent Congressional legislation to provide loans to microenterprises. As well as small enterprise loan programs of many developing countries and donor agencies (see, for example, J. Levitsky, "World Bank Lending to Small Enterprises: A Review," Industry and Finance Series, Vol. 16, 1986.)

3. For example, Maxwell Fry, "Interest Rate Policy in Turkey," Hace Hepe Bulletin of Social Sciences and Humanities, Vol. 1, No. 2, December, 1969, and Maxwell Fry, "Sectoral Investment and Credit Policies in Turkey," METU Studies in Development, Vol. 2, Spring, 1971.

4. Yoon Je Cho, "On the Liberalization of the Financial System and Efficiency of Capital Accumulation Under Uncertainty," Stanford Ph.D. Dissertation, 1984; R. McKinnon, Money and Capital in Economic Development, Washington, DC: Brookings Institution, 1973; and E. Shaw, Financial Deepening in Economic Development, New York: Oxford University Press, 1973.

5. For more on the structure of Taiwanese industry see T. Biggs, "The Structure, Dynamics and Performance of Taiwan's Industry," Employment and Enterprise Policy Analysis Project Discussion Paper No. 21, forthcoming.

6. Ibid. Also see Tibor Scitovsky, "Economic Development in Taiwan and South Korea, 1965-1981" in L.J. Lau, (ed.), Models of Development: A Comparative Study of Economic Growth in South Korea and Taiwan, 1986, p. 146.

7. T. Scitovsky, "Economic Development in Taiwan and South Korea, 1965-1981", Op.cit., p. 146.

8. Thomas Gold, "Dependent Development in Taiwan," Harvard University Ph.D. Dissertation, 1981, p. 249; and interviews with government officials in Taiwan, Fall, 1987.

9. A schematic diagram of Taiwan's financial system is provided in an appendix to this paper.

10. Y.S. Cho and D.C. Cole, "The Role of the Financial Sector in Korea's Structural Adjustment" Development Discussion Paper No. 230, Harvard Institute for International Development, [illegible], 1986, p. 10.

11. Financial Statistics Monthly, Central Bank, Taipei, 1987.

12. Foreign banks are limited to foreign trade financing and domestic loans. They can only accept demand and time deposits of less than 6 months under a ceiling of 12.5 percent of their capital reserves.

13. Kuo-Shu Liang, "Financial Reform, Trade and Foreign Exchange Liberalization in the Republic of China," Mimeo, 1987, p. 10. This article also appears in Chung-Hua Institution for Economic Research, Conference Series, No. 7, July, 1987. Also interviews in 1987 with officials of the Central Bank and other commercial banks confirm this point. As Liang puts it, "The most troublesome regulations are the very difficult standards and procedures for writing off bad loans. Small mistakes can cost a loan officer an administrative penalty in the civil service appraisal system, and he or she may also be liable to repay bad loans."

14. H.S. Cheng, "Financial Policy and Reform in Taiwan" in H.S. Cheng, (ed.) Financial Reform in Pacific Basin Countries, Federal Reserve Bank of San Francisco, 1986.

15. A very active and large money market had existed for decades, however, outside of regulated channels, taking a number of forms and employing a great variety of instruments.

16. Funds raised through the open money market are about 20 percent of those financed through bank loans and discounts.

17. Capital market financing averaged only about 10-15 percent of bank loans in the 1970s. By 1985, it was roughly 20 percent.

18. As Scitovsky points out ("Economic Development in Taiwan and South Korea, 1965-1981", 1986, p. 148, Op.cit.), originally, the policy was "devised, outlined, and advocated as a means of curbing China's hyperinflation during WWII and the civil war, by Professor S.C. Tsiang."

19. M. J. Fry, Domestic Resource Mobilization and Allocation Through the Financial Sector, Johns Hopkins University Press, 1987, p. 167.

20. Thomas Gold, "Dependent Development in Taiwan", 1981, Op.cit. Of course other domestic instruments of monetary policy have also been used - reserve requirements have been raised from time to time and changes in central bank rediscount rates and advances to the banks have also changed when needed to fight inflation. An excellent example of how government used interest rates and other measures to fight monetary disruptions occurred during the first oil shock in the early 1970s. In January, 1974, bank rates were hiked substantially and the prices of goods produced by state enterprises (such as electricity and fuel) were increased to stabilize price levels by encouraging savings and

reducing demand.

21. Scitovsky, "Economic Development in Taiwan and South Korea, 1965-1981" Op. cit., 1986, p. 181. Scitovsky goes on to say: "In short, the policy of supplementing an inadequate supply of investable funds with inflation-induced involuntary financing created a vicious circle, because it perpetuated the situation (the low domestic saving rate) that originally had called for inflationary policies."

22. R.I. McKinnon, Money and Capital in Economic Development, 1973, Washington, D.C., Brooking Institution; and E. Shaw, Financial Deepening in Economic Development, 1973, New York: Oxford University Press.

23. A. Leijonhufvud, "Costs and Consequences of Inflation" in A. Leijonhufvud (ed.) Information and Coordination: Essays in Macroeconomic Theory, 1981, New York, Oxford University Press, pp. 259-60.

24. It should be noted that a straight comparison between official and curb market interest rates is not always valid. For while official rates and curb rates are known, it is difficult to obtain information on the surcharges (and compensating balances, etc.) extracted by commercial banks in extending loans in Taiwan. Such surcharges were widely used by banks to discriminate among various kinds of qualified borrowers.

25. M. J. Fry, Domestic Resource Mobilization and Allocation Through the Financial Sector, 1987, Op.Cit., p. 16.

26. Chen Sun and Ming-yih Liang, "Savings in Taiwan 1953-1980" in K.T. Li and U.S. Yu, (eds.), Experience and Lessons of Economic Development in Taiwan: Conference Proceedings, Taipei, Taiwan, Institute of Economics, Academia Sinica, 1982.

27. It could be argued that, to some degree, government savings substituted for private savings, which might have been higher. This notion has some merit in that the household savings rate averaged about 18 to 20 percent in the late 1960s and 1970s. by comparison, Korea's household savings rate for the same period was about 8 percent.

28. J.D. Shea, J.T. Lee, and W.L. Mao, "Monetary and Fiscal Policies for Economic Development," Taipei, Taiwan, Chung-Hua Institution for Economic Research, Conference Series No. 7, July, 1987.

29. In the period 1956-60, state owned corporations provided 39 percent of government's contribution to national savings; 1961-70, 80 percent; 1971-80, 30 percent; and 1981-85, 41 percent.

30. The problem arises in separating the impact on real versus financial savings. Did high real deposit rates encourage higher real saving or did they encourage increased flows of existing financial savings into the banking system? Sun and Liang, "Savings in Taiwan 1953-1980", 1982, Op.cit., find that real deposit rates - and likewise inflationary expectations - had an influence on long-run trends in saving behavior, but the significance levels of this variable "do not explain why the savings ratio should be so high." Scitovsky, "Economic Development in Taiwan and South Korea, 1965-1981", Op.cit., 1986, argues that deposit rates were important in causing the large increase in personal savings rates, but he makes no statistical invest

31. Scitovsky points up this influence of the size structure of industry on savings behavior. In his argument, the size structure is culturally determined by preferences for family-controlled independent businesses. In turn, the size structure makes entry easy, which adds to the incentive to save. One might also add that restrictive loan practices at banks forces private savings to start businesses. Scitovsky, "Economic Development in Taiwan and South Korea, 1965-1981", 1986, Op. Cit.; Sun and Liang, "Savings in Taiwan 1953-1980", 1982, Op. Cit.

32. Scitovsky, "Economic Development in Taiwan and South Korea, 1965-1981", 1986, Op. Cit.; Robert Wade, "East Asian Financial Systems", California Management Review, Vol. 2, October, 1985,

33. Wade, "East Asian Financial Systems", 1985, Op. Cit.

34. R.I. McKinnon, "The Order of Economic Liberalization: Lessons from Chile and Argentina," Journal of Monetary Economics, Supp. 17, Autumn, 1982; and R.I. McKinnon, "Pacific Growth and Financial Interdependence," Singapore, Paper prepared for the 14th Pacific Trade and Development Conference, June 1984.

35. M.J. Fry, Domestic Resource Mobilization and Allocation Through the Financial Sector, 1987, Op. Cit., pp. xii-37.

36. M.J. Fry, Ibid., argues that the most problematic financial policies of LDCs have centered on financial restrictions rather than indiscriminate financial repression. But that the end result is the same: an increasing amount of resources diverted to the public sector and a retarded growth process.

37. Thomas Gold, "Dependent Development in Taiwan", 1981, Op.cit.

38. Keith Marsden, "Private Enterprise Boosts Growth," Journal of Economic Growth Vol. No. 1, 1986. One has to be a bit careful in ascribing the share of domestic credit to the private sector as all private. The government in Taiwan holds investments in some large, ostensibly private firms in several industries and thus exercises some control over their operations.

However, this fact does not alter significantly the comparative percentage shares between public and private sectors

39. D.C. Cole, and H.T. Patrick, "Financial Development in the Pacific Basin Market Economies" in A. Tan and B. Kapur, (eds.) Pacific Growth and Financial Interdependence, Allen and Unwin, 1986.

40. Cole and Patrick, "1986, p. 59, offer an account of a Korean government decree in August, 1972, which required all informal-sector loans to enterprises to be registered and renegotiated or be invalidated. The suddenly available data indicated that informal sector lending to enterprises amounted to about one-half of commercial bank lending. This would put the size of Korea's curb market at about half that of Taiwan's.

EEPA PROJECT DISCUSSION PAPERS

1. "The Effect of Policy and Policy Reforms on Non-Agricultural Enterprises and Employment in Developing Countries: A Review of Past Experiences", Steve Haggblade, Carl Liedholm, Donald Mead; March, 1986

2. "On Measuring Relative Efficiency in a Size Distribution of Firms", Tyler Biggs; May, 1986.

3. "The Question of Political Feasibility: Approaches to the Study of Policy Space", Merilee Grindle; March, 1986.

4. "Location Theory and the Size Distribution of Firms", Jeremy Oppenheim; March, 1986.

5. "Economy-wide Models for Analyzing Policy Reform", Jeremy Oppenheim; April, 1986.

6. "What Drives the Size Distribution of Firms in Developing Countries?", Tyler Biggs, Jeremy Oppenheim; November, 1986.

7. "The Role of Nonfarm Activities in the Rural Economy", Peter Kilby, Carl Liedholm; November, 1986.

8. "Prospects and Perils for Small and Medium Enterprises in Outward-Oriented Industrial Expansion: Lessons from Korea and Taiwan", Brian Levy; November, 1986.

9. "Lewis Through a Looking Glass: Public Sector Employment, Rent-Seeking and Economic Growth", A. Gelb, J.B. Knight, R.H. Sabot; January, 1987.

10. "The Political Economy of Policy Change in Developing Countries", Merilee S. Grindle, John W. Thomas; October, 1987.

11. "Investment Requirements and the Participation of Korean and Taiwanese Firms in Technology-Intensive Industries", Brian Levy, Wen-jeng Kuo; October, 1987.

12. "The Strategic Orientations of Firms and the Performance of Korea and Taiwan in Frontier Industries: Lessons from Comparative Case Studies of Keyboard and Personal Computer Assembly", Brian Levy, Wen-jeng Kuo; October, 1987.

13. "Export Intermediation and the Structure of Industry in Korea and Taiwan", Brian Levy; October, 1987.

14. "The Informal Sector, Policy Reform and Structural Transformation", Tyler S. Biggs, Merilee S. Grindle, Donald R. Snodgrass; July, 1988.

15. "Financing the Emergence of Small and Medium Enterprise in Taiwan: Financial Mobilization and the Flow of Domestic Credit to the Private Sector", Tyler S. Biggs; August, 1988.

16. "Financing the Emergence of Small and Medium Enterprise in Taiwan: Heterogeneous Firm Size and Efficient Intermediation", Tyler S. Biggs; August, 1988.

17. "Financing the Emergence of Small and Medium Enterprise in Taiwan: Concessional Selective Credit Programs", Tyler S. Biggs; August, 1988.

18. "Education and Industrial Growth in Taiwan: A Case of Planning", Jennie Hay Woo; August, 1988.

19. "Traders as Transactors: The Role of Trading Companies in Taiwan's Market-Based Economy", Klaus Lorch; August, 1988.

20. "Export Intermediaries and Industrial Expansion: A Theoretical Perspective", Brian Levy; August, 1988.