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Infrastructure and Urban Development Department

Report INU 21

**Compounding Financial Repression With
Rigid Urban Regulations:
Lessons of the Korea Housing Market**

By Bertrand Renaud

June 1988

Discussion Paper

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First Printing June 1988

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Bertrand Renaud is Housing Finance Advisor, from the Infrastructure and Urban Development Department of the World Bank. This paper is a revision of an earlier version presented at the 10th Pacific Regional Science Conference in Pusan, Korea, in July 1987 under the title "Housing Finance in Financially Repressed Economies: Lessons of the Korean Experience." Some key points made in the original paper have been considerably enhanced by new empirical economic results on Korea that Kyung-Hwan Kim presented at the same conference. The author is grateful to an anonymous referee for his suggestions and to Robert Buckley for his early comments.

This paper is scheduled to appear in the introductory issue of the REVIEW OF URBAN AND REGIONAL DEVELOPMENT STUDIES, Tokyo, Japan.

COMPOUNDING FINANCIAL REPRESSION WITH RIGID URBAN REGULATIONS:
Lessons of the Korea Housing Market

ABSTRACT

The impact of financial policies on the urban sector through their effect on household investment behavior is too easily ignored. This paper explores the interactions between financial and urban policies, and their joint impact on the performance of the housing sector during the course of economic development. The central hypothesis is that extended periods of financial repression and the scarcity of mortgage lending have generated significant distortions in the output of the Korean housing sector. In addition, combined with very restrictive urban planning and land use regulations, this financial situation may have led to under-investment in the urban sector of Korea during much of the past two decades. A broader question is whether such distortions and under-investment have been an integral component of the rapid growth policies of other East Asian market economies such as Japan and Taiwan, or what differences there might be.

The analysis in the paper progresses from economic growth policies and directed credit to urban outcomes, the key link is the behavior of Korean households. Policies of directed credit have aimed to accelerate economic growth. However, inflation can quickly transform such policies into financial repression which affects household savings behavior. Contrary to the very intent of policy makers, are household savings driven into the real estate market by financial repression thereby accelerating the rate of appreciation of housing? What kind of economic indicator might one want to use to gauge the extent of investment distortions over time and track policy improvements? Do urban policies which aim at orderly physical planning and the protection of scarce farm land compound problems? Can we find evidence that intersectoral investment allocation between the housing sector and other sectors has been distorted against housing? Could different financial policies lead to better outcomes not only for housing but for the rest of the economy?

The evidence is that there has been under-investment in housing in Korea. However, this does not mean that urbanization in Korea has taken place in a particularly bad way. The urban performance of Korea remains remarkable: it has absorbed large populations quickly and at improving standards. Is under-investment in the urban sector the price to be paid for achieving high growth rates? This paper could only raise the issue. An analysis of overall national economic growth is needed to determine what alternative intersectoral allocation patterns might have been feasible and maintain East Asian style high growth. Asian cross-country comparisons should also be valuable. On the other hand, there is no doubt that financial stability and an efficient mortgage finance system will greatly improve the inter-sectoral allocation of resources and achieve greater equity. The present period constitutes an important transition for the Korean housing finance system.

The World Bank

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Discussion Paper

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LESSONS OF THE KOREAN HOUSING MARKET

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COMPOUNDING FINANCIAL REPRESSION WITH RIGID URBAN REGULATIONS:

LESSONS OF THE KOREA HOUSING MARKET

I. INTRODUCTION

1. The objective of this paper is to explore the interactions between financial and urban policies, and their joint impact on the performance of the housing sector during the course of economic development. The central hypothesis is that extended periods of financial repression and the scarcity of mortgage lending have generated significant distortions in the output of the Korean housing sector. In addition, combined with very restrictive urban planning and land use regulations, this financial situation may have led to under-investment in the urban sector of Korea during much of the past two decades. A broader question which is left unaddressed is whether such distortions and under-investment have been an integral component of the rapid growth policies of other East Asian market economies such as Japan and Taiwan, or what differences there might be.

2. The original impetus for thinking that financial policies have as much to do with urban outcomes as physical conditions or even income levels came from comparing housing markets operating under different policies and institutions. For instance, why would France which enjoys the largest land area in Europe have higher housing costs and smaller units than Holland which reclaims land from the sea? In Asia, what could be the role of financial policy regimes in two of the most primate cities of Asia: Seoul and Bangkok. During the 1970s and early 1980s both cities were growing rapidly. However, their housing markets were operating in contrasting ways. Seoul had repressive financial policies and skyrocketing real estate values while Bangkok grew rapidly with moderate rises in housing prices under much less interventionist financial policies.

3. Data collected during the preparation of housing projects in Thailand and Korea were showing that Thai rates of real estate appreciation were quite moderate in spite the rapid demographic growth of Bangkok and significant per capita income gains. As recently reported for Bangkok: "residential land prices as a whole have been increasing in real terms at the moderate rate of 6-10 percent per annum in recent years, faster than incomes. The long-term increases (1971-1986) appear to have been lower (3 percent percent per annum adjusting for inflation and location). In comparison to 1971, land in land-and-house and land subdivision projects has now become more affordable".^{1/}

^{1/} See PADCO, Bangkok Land Management Study (1988), Executive Summary paragraph 36.

For Korea, the speed of real estate appreciation was a massive 14 percent compounded real rate during the period 1963-1974.^{2/} This trend continued until the early 1980s.

4. An analysis of Korea is interesting for several reasons. First, Korea's growth strategy relied on strong directed credit policies which under inflation led to financial repression over significant periods of time. It is therefore an important case of housing market expansion under financial repression. Second, Korea has so far been the fastest urbanizing economy with an urban population share of 28 percent in 1960 and 68 percent by now. It moved from low income housing markets with per capita incomes of about \$100 in the early 1960s to middle income housing markets with an income of \$2,800 in 1987. In Korea changes are likely to be easily visible. A financial perspective should throw new light on long-standing Korean riddles such as: the existence of the chonsei or "key money" system of renting; the skewed size-distribution of housing output, the continuing decline of the ratio of housing units to households in spite of rapid household income gains; the contrast between the problems created by "hot money" and real estate speculation during the 1970s with the so-called real estate market "slump" which followed macro-economic structural adjustment policies.

5. The analysis in the paper progresses from economic growth policies and directed credit to urban outcomes, the key link is the behavior of Korean households. Policies of directed credit have aimed to accelerate economic growth. However, inflation can quickly transform such policies into financial repression which affects household savings behavior.^{3/} Contrary to the very intent of policy makers, are household savings driven into the real estate market by financial repression thereby accelerating the rate of appreciation of housing? What kind of economic indicator might one want to use to gauge the extent of investment distortions over time and track policy improvements? Do urban policies which aim at orderly physical planning and the protection of scarce farm land compound problems? Can we find evidence that intersectoral investment allocation between the housing sector and other sectors has been distorted against housing? Could different financial

^{2/} See Mills and Song (1977), p. 104.

^{3/} The terms "financial restriction" and "financial repression" are used by financial development economists to characterize financial market conditions. Under "financial restriction" financial regulations aim to steer domestic savings into preferred activities under a low interest policy. Under "financial repression" regulated interest on deposits in financial institutions fall below inflation and become negative. A repressive policy can be seen as a restrictive policy gone wrong. See Maxwell Fry (1988).

policies lead to better outcomes not only for housing but for the rest of the economy?

II. HIGH GROWTH POLICY, INFLATION AND "FINANCIAL REPRESSION"

A. Role of Directed Credit Policies in High Growth Strategies

6. The aim being to achieve high growth rates and to catch up with the most advanced economies, directed credit policies have dominated the thinking of economic planners over the last forty years. This approach evolved under low and stable world inflation, steadily growing international trade and exchange rates determined by the Bretton Woods international agreements.

7. The rationale for directed credit is that government should play the key role in development in order to accelerate growth; it can do this best by playing an active and direct role in the allocation of credit to "strategic" or "priority" sectors. Therefore, financial regulators encourage institutions and financial instruments from which governments can collect resources for public uses while discouraging others. The desired effect is to increase the flow of domestic resources to the public sector without triggering a rise in inflation and in interest rates.^{4/} It must also be recalled that, in countries where institutional development is limited, the two most accessible tax bases are the financial and the trade sectors.

8. The methods of policy implementation have tended to be similar from country to country. They include favoring the commercial banking system while restricting or suppressing private bond and equity markets. This could be done directly through transaction taxes, stamp duties, special tax rates on income from capital, as well as unfavorable legal and regulatory frameworks. It could also be done indirectly with the low interest charged to preferred investors. Then governments impose high reserve requirements and rely on the obligatory holding of government bonds to tap savings at low interest rates or zero cost to

^{4/} For a good description of one such successful approach and its eventual demise in Japan see: "Historical Developments and Resultant Conflicts in the Financial System", Chapter 1 in Yoshio Suzuki (1986). Additional analyses are also found in an earlier book by the same author (1980). In Western Europe, French economic planning also relied on directed credit. For recent critical evaluations of French financial policies of directed credit see Denis Kessler and Banque de France. Policies of financial liberalization have been accelerating in France since the early 1980s.

the public sector. The imposition of interest rate ceilings also indirectly helps reduce competition from the private suppliers of credit.

9. Rather than letting banking interest rates reflect the real cost of capital and subsidizing the cost of borrowing, planners have set interest rates by fiat. The reference to the return to savers or the resource cost of implicit transfers often became lost during the 1970s when inflation accelerated. Under such policies, the pricing and allocation of financial risks has been suppressed; but the risks remained. The outcomes of such financial sector "repression" of interest rates include a dual interest rate structure between financial institutions and unregulated markets.^{5/}

**B. Financial Repression and Common Symptoms of
Non-Performing Housing Finance Systems**

10. Strong policies of directed credit emphasizing "priority sectors" can lead to problems in the housing sector, especially under inflation and fluctuating interest rates. Based on a recent review of the experience of a cross-section of countries in Asia, Latin America and the Middle-East, frequent symptoms of non-performing housing finance systems are:^{6/}

- (a) Low and stagnating share of household financial assets in total savings, even when the share of real savings in GDP rises.
- (b) Poor profitability of financial institutions.
- (c) Dual interest rate structure and large unregulated sector.
- (d) Low level of financial intermediation in the housing sector including: very small supply of mortgages, mortgage credit at controlled rates for a limited clientele, informal construction. Inappropriate financing policies cutting access to institutional

^{5/} Such a dual interest rate structure is well documented by Suzuki (1986) in the case of Japan. Among developing countries, some of the most extensive studies have been done for Korea see Yung-Chul Park (1976) and David C. Cole and Yung-Chul Park (1983, Chapters 4 and 5). For a more comprehensive macro-economic analysis of Korea, see Sweder van Wijnbergen (1981) and (1983). The most recent and complete analysis of these issues is Fry (1988).

^{6/} See Renaud and Buckley (1987), especially Chapter 3.

financing may be reinforced by non-financial policy constraints (land use controls, rent control, excessively costly or inappropriate building codes).

- (e) Highly cyclical housing output strongly influenced by monetary liquidity in the economy and realized capital gains.
- (f) Skewed size-distribution of housing output with so-called "speculative over-investment" by high income groups and over-crowding at the bottom.
- (g) Rising ratio of households to number of units.
- (h) Rapidly rising real rents in the rental markets.
- (i) Because of financial repression long-term markets disappear. Governments then resort to the creation of non-market mechanisms to generate long-term funds for housing (tax funds, compulsory bank lending, housing mandated on employers, etc...). An additional layer of urban investment distortion is thus added to the financial system. The underlying national risks hidden behind such practices is a function of the gap between controlled rates used in such funds compared to the actual opportunity cost of capital in the economy. In Latin America the distortions have been quite severe, less so in Asia.

11. Such symptoms of non-performing housing finance systems are "stylized facts". They emerge when financial repression continues for significant periods of time. Because the financial economy adjusts faster than the real economy, these symptoms of repression vary in intensity across countries, and in the same country over different periods of time.

12. Korea has experienced significant periods of financial repression. The basic pattern of interest rates between 1960 and 1986 presented in Table 1 shows that financial repression has been particularly intense in the 1970s. The period of major financial reforms and interest rate liberalization of 1965-69 led to a rapid expansion of the financial system; it was when the Korea Housing Bank was created. This phase is often mentioned as a successful example of financial liberalization with high and positive real rates mobilizing financial savings effectively. However positive real rates did not last and financial repression coincided with the most massive phase of urbanization in Korean history. The responsiveness of financial sector

growth to real interest rates is very clear when comparing Table 1 and Figure 1 which shows the ratio of M2 to GNP over 25 years.^{7/}

13. Comparing levels of financial development in Korea, Thailand and Japan, Figure 2 shows that Thailand achieved a higher level of financial level development throughout the entire period due to considerably less government intervention in the financial markets. The depth of Thai financial development measured by the ratio of M2 to GNP is greater than in Korea in spite of a per capita income that was at first half and then soon only one-third of Korea's.

Table 1: REAL DEPOSIT RATES IN KOREA, 1960-1986

<u>Period</u>	<u>Deposits Rate</u>
1960-64	-6.7%
1965-69	26.9%
1970	1.8%
1971	-2.0%
1972	5.0%
1973	-19.1%
1974	-15.8%
1975	0.6%
1976	1.5%
1977	-6.4%
1978	-8.8%
1979	-16.3%
1980	-0.4%
1981	7.0%
1982	4.0%
1983	1.3%
1984	5.3%
1985	5.8%
1986	7.7%

Sources: Hanson and Neal (1985) and Dornbush and Park (1987). Their calculations were based on official statistics. See also Figures 4 and 5 which are directly based on the original sources.

^{7/} M₂ is one of the simplest if imperfect measure of the willingness of the public to maintain time and savings deposits with financial institutions. M2 over GNP is very convenient to compare different countries and follow changes over time.

Figure 1

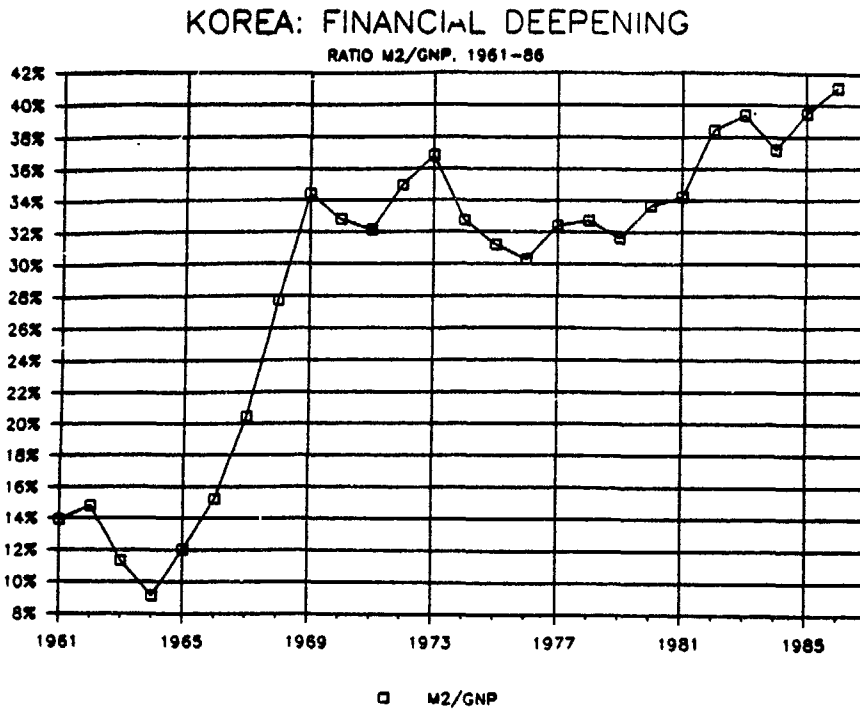
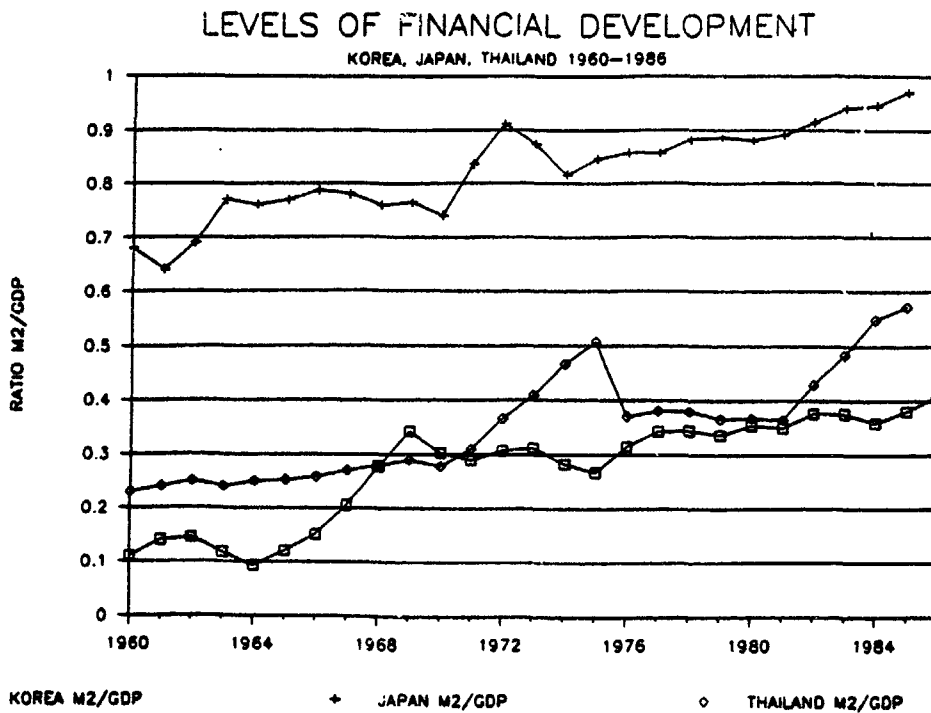


Figure 2



III. THE HOUSEHOLD RESPONSE TO FINANCIAL REPRESSION

14. A major and direct link between financial policies and urban investment is through the behavior of households and their desire to accumulate wealth. In developed economies where housing finance is available, housing provides the dominant saving instrument for most families. Saving takes place in three ways: in the form of prior savings for down-payments, through the amortization of outstanding loans as well as through capital gains. The higher the expectation of capital gains the smaller the other two forms of savings are likely to be.

15. The place of housing in household savings is expected to be much larger in developing countries. The situation prevails because the return on housing is not reduced by interest rate ceilings as are the returns on many forms of financial savings. Housing values keep pace with inflation and do not fluctuate as widely as does the value of other investments. Housing is also a very widespread and familiar investment. It requires relatively little financial sophistication to save through the ownership of a house. Finally, in rapidly urbanizing countries housing has historically had a high and stable rate of return. In economies with fewer attractive investment options for households, the role of housing in accumulating and maintaining net worth is likely to be considerable.

A. The Apparent Inability to Mobilize Household Savings

16. The role of housing and real estate in the Korean economy has been particularly prominent during the 1960s and the 1970s, but it was often misunderstood. There was much concern at the time about the low level of private savings and official alarm that such saving was directed to "socially unproductive investments".

17. A few economists strongly argued in the 1970s that two major factors were at work to make the private savings performance and the urban situation both more difficult. First, private savings were "deflected" by repressive financial policies into capital gains on land and other quasi-fixed factors and these gains were very large given the very fast growth of the economy. Second, Korean macro-economic policies also lowered the effective private rate of return on investment.

18. Jeffrey Williamson was one of those who articulated this point most effectively. He used the word "deflected savings" to stress that economic policies were having effects opposite to the intent of policy makers. Actually, from a portfolio analysis viewpoint there was no deflection. Public policies which were taxing heavily the holding of financial assets were inducing a reallocation of wealth portfolio

components. The real estate market in Korea had become a substitute for the equity market and the holding of financial assets.^{8/}

19. It was pointed out that macro-economic policies may have served to raise land values above what they would have been in the absence of such distortions. However, because of the almost total separation of policy formulation into "macro-economic policies" and "physical planning policies" there was little receptivity to such analyses. Policy makers continued to take a "partial equilibrium" approach to what is a "general equilibrium" problem. Economic planners became even more determined not to fuel what they saw as "socially wasteful speculation" by not allowing the expansion of the housing finance system. Physical planners stiffened their resolve to prevent the "destruction" of prime agricultural land or open-space and tightened the land-use laws.

20. Analyses of national accounts for the late 1960s and early 1960s showed that the total domestic marginal savings rate was dominated by the marginal public savings rate which was about 24 percent, while the marginal private savings rate was only 14 percent (Williamson, 1976). But it is well known that conventional national accounts ignore capital gains and only measure the accumulation of assets. In other words, national accounts measured only the cash-flow effects of policies and not their impact on the balance-sheet of various sectors, in this case households. From the household viewpoint, the reality is that the saving objective is to increase the stock of private assets to the desired relationship to current income. When income rises very rapidly as was the case in Korea, the desired level of wealth can be raised through the accumulation of new assets, the increase in the price of existing assets, or both.

21. The stock of assets has two components: land or real estate R of price P_r , and conventional capital K of current price P_k . The stock of land R being fixed ($dR = 0$), current saving which is simply an increase in wealth can be described in terms of current prices as:

$$S = dW = [R \cdot dP_r + K \cdot dP_k] + P_k \cdot dK$$

[Savings] = [Capital Gains] + ["conventional" capital formation]

Dividing both sides of the equation by Y the income in current prices will yield an "augmented" savings ratio S/Y that more correctly reflects the behavior of private savings. When the appreciation of land and that

^{8/} Opposite portfolio shifts took place following the structural adjustment policies of the early 1980s and a clear reverse substitution between housing and the stock market took place. There is no empirical evidence at present, but one could expect that the early 1980 shifts were dominated by upper income groups but included also the emerging middle-class unable to finance housing for lack of mortgage finance.

of residential structures is taken into account, the Korean conventional private domestic saving rate is essentially doubled for the period 1963-76 (Williamson, 1977).

B. Dominance of Real Estate in Korean Household Portfolios

22. Land has represented a very large part of Korean national private wealth. According to the unpublished National Wealth Survey of 1968, its share was 23 percent of total wealth including agriculture, business and government in addition to households. Such a share is considerably higher than in developed countries.^{9/}

23. What was not considered by Korean policy makers during the 1960s and 1970s was that macro-policies which lower the effective private rate of return to other investments were driving savings into "land speculation" and contributed to raising land values above what they could have been otherwise. This linkage between the value of land and the discount rate in the economy can easily be stated. Defining:

P_1 = price of land (or average land values)

r = average land rents

i = effective discount rate

land can be appraised at the net present value of an infinite stream of rents as:

$$P_1 = r/i$$

Because these variables change over time, the relationship can be restated in rates of change as:

$$P_1^* = r^* - i^*$$

In Korea, both P_1^* and r^* have been positive and large during the seventies, as already reported. Generally, one can expect that land values will increase at a lower rate if the effective discount rate increases over time. Because government policies of the period were driving a wedge between the effective private return and the higher national rate they contributed to raising the rate of appreciation of land.

^{9/} See the article by Angus Maddison, "Growth and Slowdown in Advanced Capitalist Economies," Journal of Economic Literature, Spring 1997.

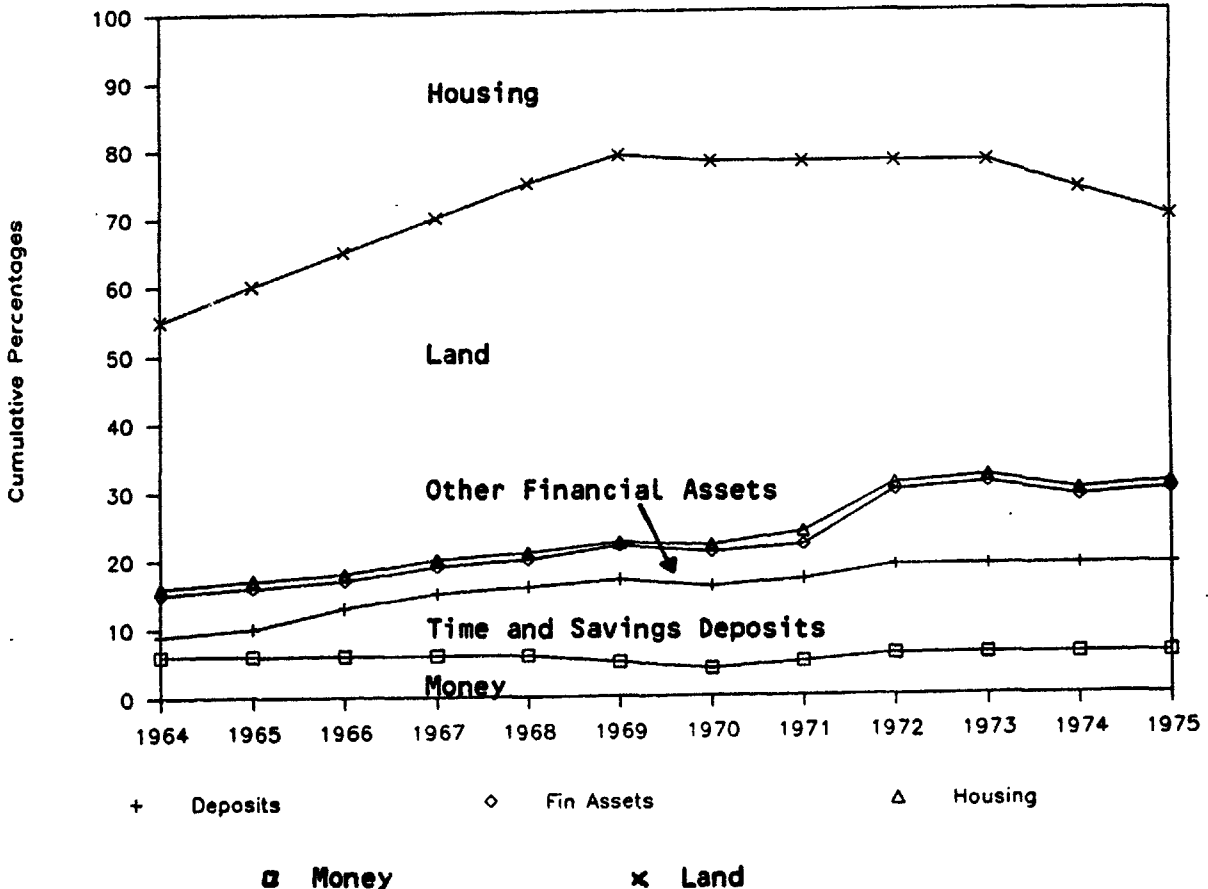
24. According to the analyses of Sang-Woo Nam and David Ortmeier the structure of the household wealth portfolio during the middle 1970s was as follows:

Money	5-6 percent
Time/savings Deposits	12-14.5 percent
Bonds	under 1 percent
Equities	8-11 percent
UMM (curb) Loans	0.75-2 percent
Land	40-50 percent
Dwellings	20-25 percent

Portfolio adjustments during the period were very slow because of the underdeveloped credit markets and the high transaction costs of altering portfolios. Figure 3 shows the behavior of the household portfolio over the period 1964-1975. Real estate assets make up over 70 percent of household wealth during the period, see Figure 3. The share of housing and real estate assets matches the shifts in financial policies which are reflected in the ratio M_2/GNP of Figure 1.

Figure 3

KOREA: HOUSEHOLD PORTFOLIO
1964 - 1975



IV. PRIVATE SUBSTITUTES FOR DEFICIENT BANKING SERVICES

25. Financial repression discourages households from making bank deposits and blocks the supply of mortgage finance. In Korea, the dual interest rate structure which developed was very sharp. Korean households used housing assets and developed a unique form of rent, the "chonsei" system as alternative financial claims. They also devised complex strategies to purchase housing and break the borrowing barrier of a minimal supply of mortgage finance. These substitute responses are now discussed before evaluating housing market outcomes.

A. Unregulated Markets and Dual Interest Rate Structure

26. Financial policies in Korea led to the development of a lively unregulated financial market in parallel with financial institutions. The dual interest rate structure between the two remains very pronounced. The relationship between curb market rates and institutional rates on deposits in Korea is well documented and the interactions between institutional financial markets and unregulated money markets (UMM) are now better understood.^{10/} The size of the UMM markets has been quite large and UMM rates could be used in combination with other rates to evaluate the opportunity cost of funds in Korea. Nominal UMM rates have been very high but are declining. The margin between UMM rates and inflation is positive as expected (Figure 4).

27. Over the period 1963-86, nominal terms UMM rates have been three to six times higher than 3-month deposit rates, and two times 12-month deposit rates at regulated banks including the Korea Housing Bank (Figure 5). These two ratios clearly indicate that financial policies have created a wedge between the effective rate of return on financial savings available to households and the true national rate of return on capital. The policies of stabilization and liberalization initiated in the 1980s are reflected in price stability after 1981 and the steady decline in the UMM rate. However, real UMM interest rates have remained remarkably high of the order of 20 percent per annum.

B. Financial Repression and Rental Markets: the "Chonsei" System

28. The "chonsei" system is a system of key money deposits extensively used in the rental markets of Korea. The "chonsei" payment is not a security deposit but a financial claim which has developed as a substitute for the financial claims that were not provided by regulated financial institutions. "Chonsei" consists in the payment of a large cash deposit to the landlord instead of monthly

^{10/} See Yung-Chul Park (1977), Cole and Park (1983, chapters 4 and 5), Van Wijnbergen (1981 and 1983).

Figure 4

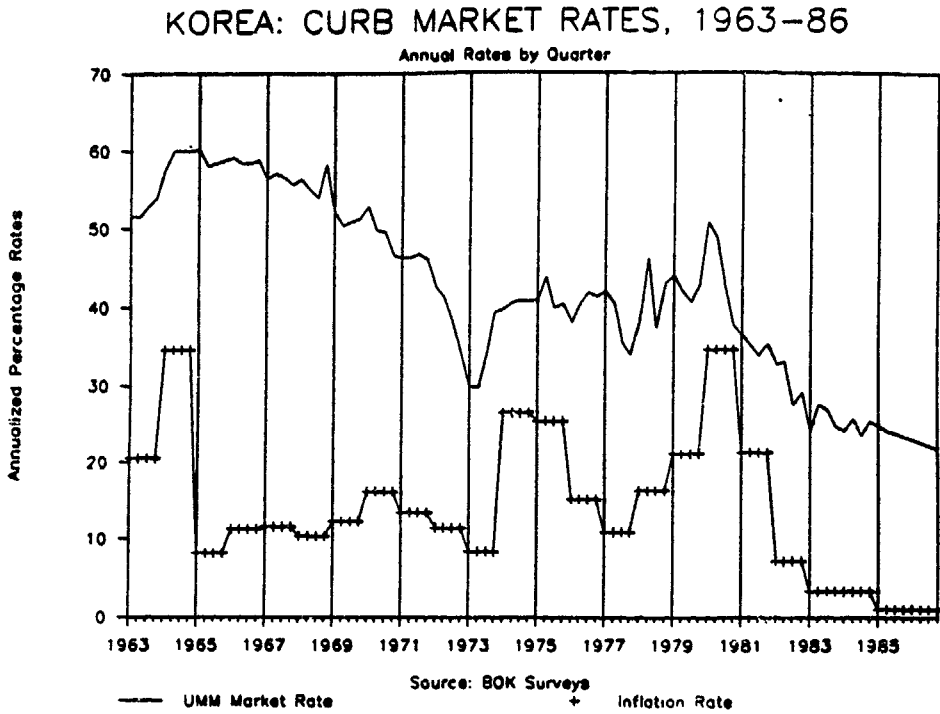
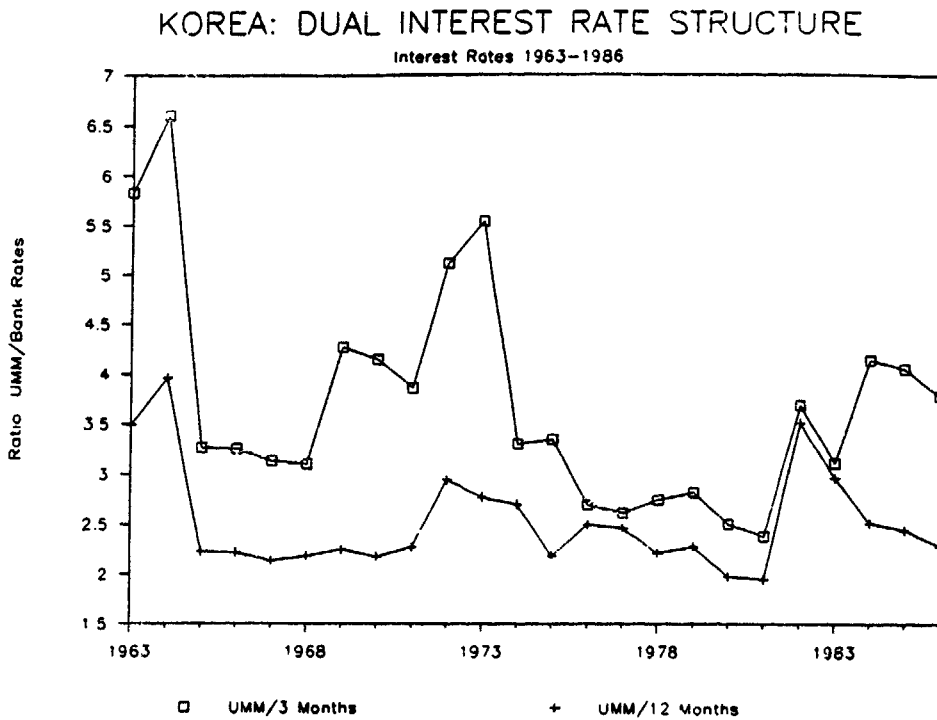


Figure 5



rental payments. This cash deposit can be increased by the landlord during tenancy and must be refunded in its entirety by the landlord when the tenant vacates the dwelling. The interest foregone by the renter is expected to cover the implicit rental value of the dwelling. Instead of raising rents when the rental market becomes tight or operating costs increase, landlords increase the amount of chonsei.^{11/}

29. This pervasive practice developed spontaneously in response to earlier economic and financial market conditions when inflation was high, regulated interest rates were negative. Urban housing was in extremely short supply due to the destruction of the housing stock during the war and to high rates of urbanization. Chonsei is the most conspicuous aspect of the financial repression imposed on the household sector in Korea. The financial magnitudes involved in this housing-related financial claim are very large both for an individual tenant and in comparison with the institutional housing finance system.

30. Household surveys in the mid-1980s show that chonsei represents a very high share of the capital cost or market value of the rented space or unit. Typical chonsei ratios range between 35 percent and 40 percent of unit market value, these ratios are higher in large cities. For modern apartment units they can go as high as 70 percent of the unit's value. Thus the financial claim can be startlingly large. For instance, the Office of National Tax Administration (ONTA) reported in 1987 that a Hyundai apartment in Apkujong-dong a quality district of Seoul was posted at 243 million won for tax purposes, or 3 million per pyong (one pyong is 3.3 m²). For a typical 55-pyong Hyundai apartment the Chonsei deposit can therefore vary between US\$75,000 and US\$133,000 when per capita income in Korea was \$2,800. Because, it is not often possible to accumulate such contracts exist such as partial or declining chonsei, which large financial savings for housing, various forms of rental include blends of cash deposits and monthly payments. Such large financial claims also explain why room rentals and dwelling sharing are so common.

31. As a market, chonsei is considerably larger than the outstanding bank lending for housing. The chonsei system was estimated on the basis of simple ratios to be about 5.5 times larger than the housing finance system in 1980. The results of the KRIHS survey of household assets also indicate that chonsei funds used in the purchased of housing were five to six times larger than the volume of mortgage lending provided by KHB in (see Table 2).

32. As a savings instrument, chonsei reflects the poor quality or absence of household-oriented financial claims generated by the regulated financial sector. On one hand, the tenants build financial assets with the periodic increase in the deposit amount, generally every six months. They receive a real rate of return on these financial asset which is positive but in kind in the form of housing services. This return has been found to stay close to the UMM interest rate. Tenants rent less space than they would under a monthly rent system.

^{11/} See Renaud (1985) and World Bank (1986).

Table 2: Korea: Sources of Funds for Housing Purchases by Household Income Level for All Households, 1986.

HH INCOME\ 10,000 WON\	SALE OF PREVIOUS HOUSE (1)	RETURNED CHONSEI DEPOSIT (2)	SAVINGS & SECURITIES (3)	KYE (4)	SALE REAL ESTATE (5)	KNB LOAN (6)	FORMAL LOAN (7)	WORK PLACE LOAN (8)	CURB MARKET LOAN (9)	CHONSEI DEPOSIT FROM RENTER OR RELATIVE (10)	ASSISTANCE FROM PARENT OR RELATIVE (11)	WORK PLACE GRANTS (12)	OTHERS (13)	TOTAL
1-10	11.9	23.9	31.3	6.0	1.5	4.5	0.0	0.0	6.0	3.0	3.0	1.5	7.4	100.00
11-20	11.9	23.8	27.7	8.9	5.6	2.6	1.0	0.3	6.9	1.7	5.6	0.3	3.7	100.00
21-30	8.6	26.3	28.8	8.1	3.7	1.8	1.8	0.4	4.7	4.6	7.8	0.4	3.0	100.00
31-40	10.5	22.5	29.3	8.9	2.6	2.5	2.8	1.4	5.4	4.5	7.3	0.2	2.1	100.00
41-50	12.7	18.9	29.5	9.4	2.9	3.8	2.6	1.3	4.9	5.3	5.8	0.2	2.7	100.00
51-70	16.2	15.5	26.4	8.3	3.0	4.9	3.9	0.6	5.0	6.3	7.1	0.2	2.6	100.00
71-100	18.3	13.0	26.5	7.4	3.8	8.6	2.4	1.1	4	6.2	6.4	0.3	1.9	100.00
over 100	23.9	7.1	29.5	6.7	4.5	3.4	6.3	0.4	2.6	7.1	6.0	1.2	1.3	100.00

Source: Research on Policies to Strengthen the Housing Finance System.
Interim Report. Dec. 1986, Based on New KRINS Survey. P. 69.

33. As a source of funds, chonsei typifies the value of housing as a collateral. However, instead of borrowing from a bank against this collateral, the owner is extracting a loan from his tenant (or tenants). In terms of bargaining power, the lack of adequate housing finance and the scarcity of housing favor landlords. With chonsei, tenants assume all default risk since the landlord receives the total deposit in advance. On the other hand, the imputed rents tend to be competitively priced and reflect the cost of capital on the curb (UMM) markets. The chonsei system may be widespread but it is not financially efficient either for the landlord or the tenant compared to the possibilities offered by financial institutions under liberalization of the financial system.

C. Financial Strategies to Achieve Housing Ownership

1. Sources of Funds for Housing Purchases: Overview

34. The 1986 KRIHS survey of household assets directed by Kyu-Bang Lee provides the first reliable view of general housing finance conditions in Korea. Table 2, originally published by KRIHS, reports the share of the total funds used to finance housing by 13 household income groups. This table shows how regressive the present housing finance system is, with the lowest income categories relying the most extensively on costly and short-term informal sources: kye (rotating credit associations), curb market loans, and chonsei from renting out part of the unit. Lower income households also have little access to loans from their work place or other institutions, unspecified sources are also large. The minimal role of the housing bank is also clear: as much financing comes from direct chonsei rental (column 10) as from KHB loans (column 6). The total volume of chonsei claims is of course greater (see columns 2 and 10).

2. Households Receiving Partial Bank Financing

35. The lack of mortgage lending in Korea forces households into complex funding strategies as shown by the annual surveys of units partially financed by the Korea Housing Bank. This subset covers a more fortunate minority of home buyers. Table 3 ranks in order of frequency the most common strategies currently used by Korean households.^{12/} There are for these borrowers eight major sources of

^{12/} These tables were prepared from the 1985 KHB Survey at my request by Jae-Hye Han. Ms. Han has recently completed an analysis of the Korean tenure choice which draws on a variety of recent housing surveys. See Jae-Hye HAN, (1987). The present analysis was suggested by French surveys of household wealth and mortgage borrowers, the French market being subjected to financial repression and a scarcity of mortgage funds until the early 1970s.

Table 3: Korea: Strategies Followed by Households to Purchase Housing; All Households.

Strategies	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)		(10)	(11)	(12)	(13)	(14)
	KMB Loan	Sale of Prev. House	Returned Chonseil Deposit	Financial Savings	Assistance from Parent or Relative	Loans from Financial Institution	Chonseil from Renter	Others	#	%	Household Income (Mean)	Price of Structure (Mean)	Amount of Downpayment (Mean)	Loan-to-Value (%) (Mean)	Price / Income(Yr (Mean)
1	596.06 (30.06)	*	601.55 (28.39)	949.55 (41.53)	*	*	*	*	317	19.24	52.20	2,147.15	1,551.09	30.08	3.89
2	618.25 (25.86)	1,989.20 (74.14)	*	*	*	*	*	*	315	19.11	58.83	2,607.45	1,989.20	25.86	4.37
3	630.26 (23.44)	1,554.47 (52.7)	*	705.68 (23.86)	*	*	*	*	304	18.45	60.18	2,890.42	2,260.15	23.44	4.63
4	596.91 (29.61)	*	*	1,683.52 (70.39)	*	*	*	*	97	5.89	62.19	2,280.42	1,683.52	29.61	3.69
5	696.21 (28.08)	*	433.94 (17.25)	1,046.36 (38.63)	*	428.64 (16.04)	*	*	66	4.00	43.55	2,605.15	1,908.94	28.08	5.51
6	583.85 (25.61)	*	632.69 (23.66)	821.95 (30.6)	527.08 (20.13)	*	*	*	65	3.94	52.65	2,565.57	1,981.72	25.61	4.75
7	712.50 (21.74)	1,751.09 (46.03)	*	753.44 (20.24)	*	434.22 (11.99)	*	*	64	3.88	53.11	3,651.25	2,938.75	21.74	6.43
8	600.00 (28.64)	*	637.56 (25.86)	743.41 (28.87)	*	488.05 (19.31)	*	*	41	2.49	53.22	2,469.02	1,869.02	25.96	4.52
9	645.31 (29.05)	*	*	926.97 (37.05)	876.75 (33.9)	*	*	*	32	1.94	42.75	2,449.03	1,803.72	29.05	5.34
10	640.00 (28.64)	*	445.20 (19.78)	712.40 (29.18)	*	*	547.20 (22.4)	*	25	1.52	52.76	2,344.80	1,704.80	28.64	4.19
11	608.33 (19.06)	1,684.17 (49.22)	*	522.50 (16.99)	*	442.50 (14.74)	*	*	24	1.46	61.04	3,277.50	2,669.17	19.06	5.02
12	531.25 (21.05)	1,486.67 (51.58)	*	*	*	780.42 (27.37)	*	*	24	1.46	56.33	2,798.33	2,267.08	21.05	4.58
									1,374	83.38	100.00				

Source: KMB, Survey of the Housing Units Financed by the KMB, 1985.

funds: KHB loans, capital gains from the sale an earlier house, the return of a chonseï deposit, financial savings, assistance for relatives, loans from other financial institutions (not necessarily second mortgage loans), the chonseï deposit coming from a tenant, and other sources. The income of the borrower, the price of the unit and the ratio of housing price to household income show the link between a strategy and who uses it. There is a clear difference between first-time buyers and borrowers who sold an earlier home.

36. Over 28 strategies were actually in use in 1985; the 12 most frequent covering 83.5 percent of sample borrowers are presented in Table 3. The data clearly show the inefficient and fragmented methods of financing housing. KHB loan-to-value (LTV) ratios are very low and consistently below 30 percent. This defeats the first-time ownership objective of KHB: less than half the borrowers were first time owners. This lending strategy reflects the monopolistic position of KHB, its public status, and its lack of funds. KHB's performance is judged according to the number of loans it makes. Besides, low LTV ratios minimize default risk and eliminate the need for income tests, thereby greatly reducing administrative costs.

37. Among the 47 percent of the borrowers who were first time home-owners, the majority (49 percent) relied on their previous chonseï deposit and other financial assets. The chonseï deposit provided 28 percent of the funds. Those with lower incomes had to sublet part of their unit to finance their unit, their house/income ratio was the highest in the group at 5.5 times. This confirms that chonseï renters are used in the case of high housing price/income ratios. The general survey of the Korean population and the surveys of KHB borrowers clearly show the large degree of fragmentation and inefficiency which could be eliminated by the financial liberalization of housing finance and the effective development of a mortgage market.

V. COMPOUNDING FINANCIAL REPRESSION WITH RIGID LAND REGULATIONS

38. Korea is one of the three economies with the highest population densities in the world, the other two being Taiwan and Bangladesh. Therefore some would argue that one should not be surprised to find that the ratio of the value of a unit to the income of the household is high. Also, were not the high rates of return in the land market caused by the extremely fast pace of growth of the urban population and the rapid rise of household incomes? The empirical evidence supports the view that rapid land appreciation was caused by more than rapid urbanization and the scarcity of urban land in Korea. This evidence is that land use policies have compounded the effects of financial repression, restricted the supply of housing, helped raise rents and thus accelerated the rise of the relative price of housing compared to household incomes.

39. Three types of physical planning policies have restricted the supply of land. First, there have been strong zoning policies to restrict land-use conversion, especially of rice paddy land, when in fact the productivity of land in urban use was found consistently superior to farm use at the city margin (see Hanratty, 1977). Second, the use of a green belt policy which when marginally relaxed could increase urban welfare (see Kyung-Hwan Kim, 1987). And third, the land readjustment methods which relies on the large differential between the price of serviced land and the price of raw (often a seven to eight-fold increase) linked to monopolistic administrative practices to finance urban investment (see William Doebele, 1982).

40. Various analyses of the structure of housing demand in Korea have shown that it is price inelastic, but that its income elasticity is much greater. A study confirms that housing supply has been markedly more price inelastic in Korea than in developed countries like the U.S. or Canada (see Chung, 1985). The net effect has been that the value of the housing stock has become higher than it would have been in the absence of distorting policies. There can therefore be an increasing gap between the money amount of housing investment and the increase in the quality of the physical standards that lies behind it.

41. To show that it is not physical density alone but policies which affect the price of urban land in Korea, Ingram (1980) used a production function framework to look at the rise of factor payment as a proportion of output in farm use and urban use. To make this point Ingram compared Korea with one of the most land abundant country, the United States. Korea's gross population density is about sixteen times higher than in the United States. In the late 1970s, four percent of the national land area was classified as urban, but over 80 percent was occupied by agriculture or forests. Land in urban residential use accounted for 38 percent of Korea's total land value but only 0.5 percent of Korea's total land area.

42. Factor payment shares in the agricultural sector were very similar between the United States and Korea in spite of the huge difference of 300 to one in factor proportions of land to labor between the two countries. On the other hand in the non-agricultural sector the ratio of land value to product in Korea is twice that of the United States. The ratios of agricultural land value to agricultural product value were 5.4 in the U.S. in 1970 and 4.2 in Korea in 1975. The ratios of non-agricultural land value to non-agricultural output were 0.62 in the U.S. and 1.2 in Korea. Similarly, in Korea "over the entire period 1963-1974 land values in the twelve major cities grew more rapidly than did the value of non-agricultural output", (Ingram, p.108).

VI. CONSEQUENCES OF FINANCIAL REPRESSION AND URBAN REGULATIONS

43. The present system of housing finance in combination with physical planning policies raises two kinds of questions regarding their distorting impacts on the housing sector. First, has there been intersectoral resource mis-allocation with under-investment in housing? Second, within the housing sector did financial repression lead to a regressive pattern of housing production and increasing inequality in wealth distribution and housing consumption?

A. User-cost of Housing and Investment Market Disequilibrium

44. As noted, the ratio of housing prices to household incomes is high in Korea, of the order of 5 and rising (see Table 3, column 14). However, housing investment disequilibrium can not be inferred directly from the level of ratio or even its trend. A determination that there is under-investment in housing can be made if the cost of capital in housing is considerably higher than the cost of capital in other uses. Such a capital cost difference would signal that policy rationing is preventing an efficient intersectoral allocation of capital between sectors. The user cost of capital in housing can be defined by the relation^{13/}:

$$C = [i + t + m + d - ep] \cdot p_h$$

where:

C = user cost of housing

i = nominal interest rate

t = real estate tax rate

m = maintenance cost

d = rate of housing capital depreciation

ep = expected rate of capital gains adjusted for taxes

ph = the purchase price of housing

^{13/} See the analyses of Follain, Hendershott and Van Order in the case of the United States. Recently, Mills has raised the opposite question of over-investment in housing in the case of the United States, see Mills (1987).

45. Under-investment in housing exists when the user cost of capital in housing¹⁴ is significantly higher than the user cost of capital in the rest of the economy. This would indicate that policies are preventing a balanced flow of resources across sectors. The working hypothesis is that there are two main factors raising the user cost of capital in the housing sector above the opportunity cost of capital in the economy. First, the interest rate on private financing reflected by curb or unregulated market interest rates (UMM) which more than compensates for the high rate of net capital gains. Second, the relative price of housing whose value has been raised by financial policies, land policies as well as high transaction costs which include large transfer taxes. So far in Korea, property taxes and other forms of user taxes are not high by international standards. Maintenance costs and rates of depreciation are not known to be especially high and tend to balance each other out.

46. What was a likely outcome when the paper was originally written has been confirmed by the recent work of Kyung-Hwan Kim (1987). He estimated that small changes in green belt boundaries for Seoul (by one kilometer) would increase developable land by about 14 percent and lead to a 2.7 percent decrease in housing prices; the elasticity of housing prices with respect to land supply being estimated at -0.2.

47. Similarly, Kim could show that policies were preventing the flow of funds into housing. Using a housing market survey for Korean cities of 1982 he found that the estimated real rate of return to housing was on the order of 8 percent for single family units and 12 percent for multi-family units. These rates considerably exceeded annual average real rate of return on corporate bonds of 5.1 percent by 3 to 8 percentage points.^{14/}

B. Skewed Size Distribution of New Housing Output

48. Two convergent forces lead to a skewed size distribution of output in favor of large units. First, in most countries, the top income deciles of households control a very high share of total assets. In the absence of financial repression and with well developed equity markets their wealth will be diversified into a variety of financial and real assets. Under financial repression they favor real estate assets and acquire the largest units possible. Second, under rapidly rising incomes the other households would like to buy adequate

^{14/} There may be questions about the accuracy with which corporate bonds reflect the exact opportunity cost of capital in the Korean economy. However, there is agreement that this is the best indicator, see Dornbush and Yung-Chul Park (1987).

units. A full cash transaction being impossible, in the absence of mortgage loan they achieve divisibility by acquiring large units and subletting part of it.

49. Comparisons between the size distribution of income and the size-distribution of housing units indicate that the output of new housing units is indeed skewed and contains a large share of big units. The Korean share of housing investment in GNP is not particularly low, but the number of new units per thousand households is low. Making a parallel with West-Germany during the postwar period, the size of new Korean units was more than 20 percent larger than in Germany in spite of the fact that Korean per capita incomes were only a third or less of German income.^{15/}

C. Asset-Based Housing Purchases and Accentuated Housing Cycles

50. Because of the lack of mortgage financing, the acquisition of a new unit is heavily dependent on the sale of existing units. This asset-based financing accentuates boom-and-bust cycles, and renders the housing sector very sensitive to changes in the level of liquidity in the economy. The close correlation between changes in M1 and in new housing is very clear in Figure 6. Also, while there has been a clear upward trend in the share of housing investment in annual GNP, as should be expected, year-to-year fluctuations have been very pronounced (see Figure 7). Econometric analyses by Chung (1985) confirm these strong cycles.

51. The lack of mortgage finance in the housing market increases the dominance of the capital gains aspects of housing over the imputed rental value of a unit. When the stock market began to develop in the early 1980s and inflation fell below 3 percent, wealthy households that were already owners shifted their interest to financial equities. This was reflected in the drop in the average price of houses in major cities by 2.8 percent between December 1985 and December 1986. Confirming the long-term asset demand for occupancy of the remaining households (as opposed to short-term investment), KHB reported that the strongest demand is for middle size units. The average price for units over 40 pyong and for less than 25 pyong (3.3 m²) was softening while that for 26 to 39 pyong remained steady.

D. Shortage of Units and Decline of the "Housing Supply Ratio"

52. The rental market is regressive in Korea because the ability to rent is based on accumulated wealth and not on current earning power. The very high ratio of chonsei to the market value of the unit rented explains why housing units are so often shared and the very poor

^{15/} After adjustment for purchasing power parity using the Kravis et al system for international comparisons of gross product and purchasing power. See World Bank (1978), Chapter 3.

Figure 6

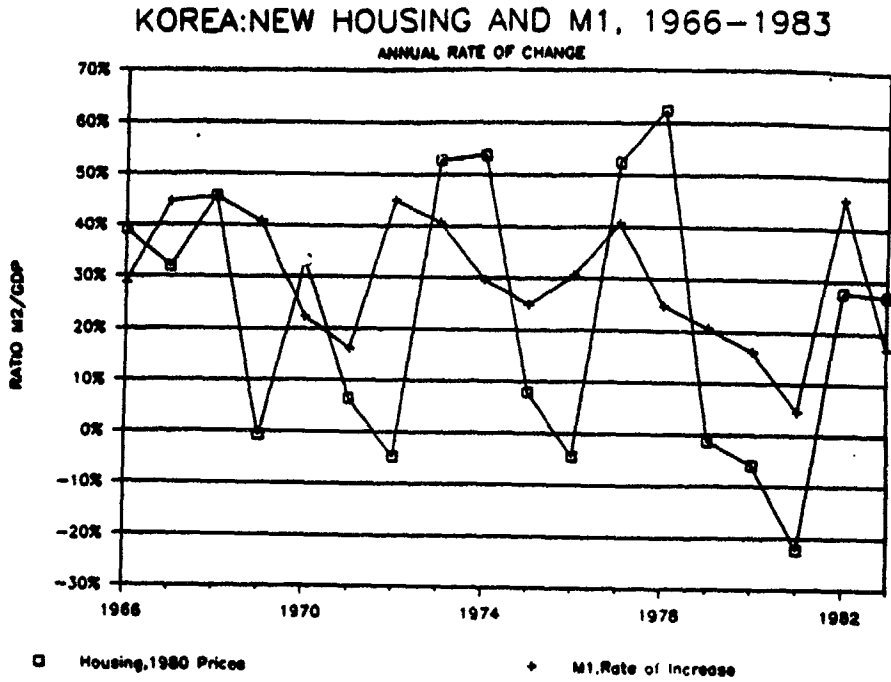
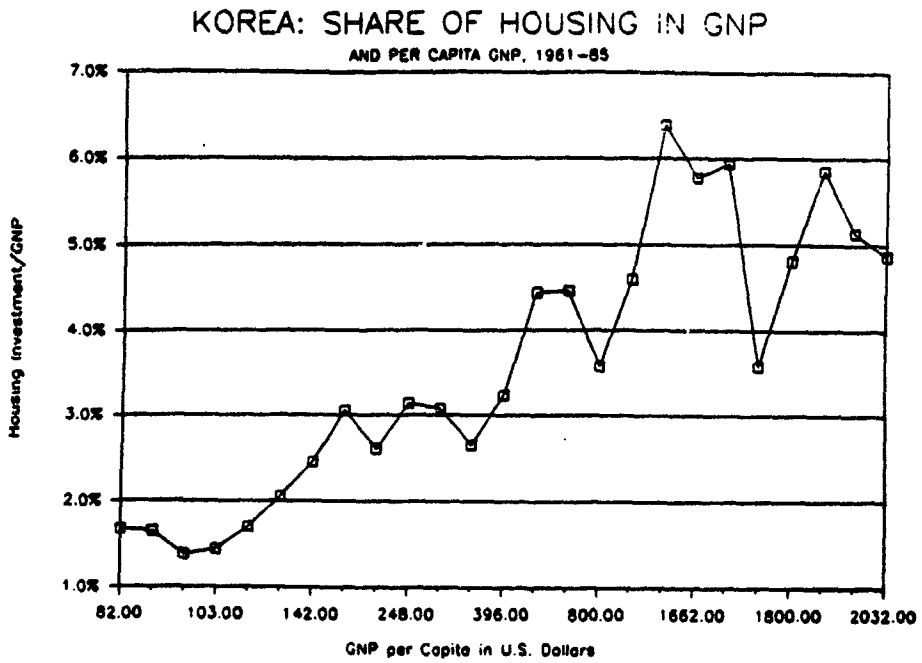


Figure 7



ratio between housing units and the number of households in cities, as shown in Figure 8. Note the correlation between periods of severe financial repression and a fall in the supply ratio (compare with Table 1).

53. As already seen, tenants are required to provide large lump-sum payments which are about equal to one year of their salary. Most young renters without accumulated savings (or affluent parents) cannot afford to rent a full unit but must sublet part of a unit from others. Monthly rents are associated with low-income status until now. Korean surveys show that multiple renters are more frequent when income is lower because of limited chonsei savings. Crowding at the low-income end of the market is very severe. In the 1980 census, only 30 percent of urban households occupied an entire unit, while 30 percent shared it with one other family, 18 percent with two and 22 percent with three or more households in a single unit (see 1980 Census, Table 7).

54. Analyses of the censuses over time show that the low value of the "supply ratio" in cities graphed in Figure 8 is also linked to two

other factors: the removal of a large number of small units or their enlargement. The enlargement of small units is again linked to the scarcity of financing which leaves room only for an incremental approach to housing investment. Apartment units do not lend themselves to such enlargement; this is another reason why the lack of mortgage finance increasingly distorts the supply of new housing in Korea.

E. Rapidly Rising Real Rents

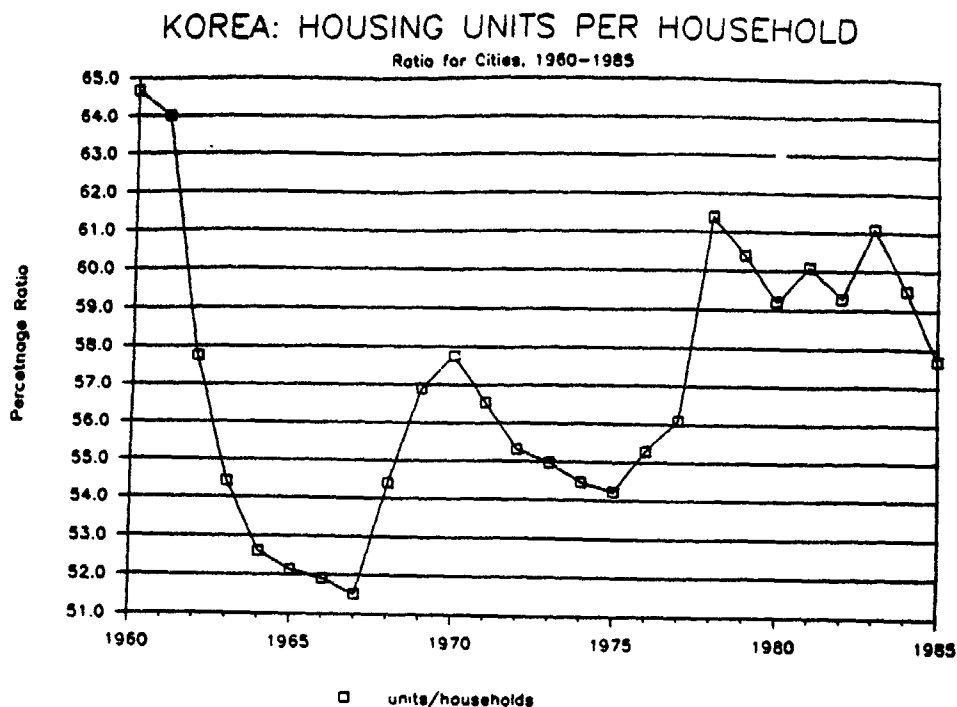
55. The lack of mortgage financing for new housing construction is reflected also in continuing rise of real rents with rental charges rising by 5.3 percent in 1986; this increase is twice the CPI rise of only 2.6 percent during the same period.^{16/} Long-term series on real rent increases remain to be developed.

VII. CONCLUSION

56. The findings for Korea confirm the hypothesis that the nature of economic planning and financial policies not only play significant roles in explaining the performance of the housing sector, but is likely to have a greater impact than other variables such as the level of per capita income or the degree of urbanization, (see Renaud and Buckley, 1987). For a long period of time, Korea has shown the features of non-performing housing finance systems under policies of strong directed credit and alternating phases of mild and strong financial repression.

^{16/} KHB press release March 6, 1987.

Figure 8



57. With the achievement of price stability and pursuit of financial liberalization, the financial markets are at a threshold in terms of housing finance policies. There are major opportunities for a large, decentralized and efficient mortgage market for the first time. Analyses of the new flow-of-funds data which separate the household sector from the non-incorporated business sector shows the strong growth of household net financial assets which have more than doubled in five years under stable prices. Confirming the very slow decline of the "repression ratio" between UMM rates and banking rates, households have stayed away from monetary (or deposit) institutions and favored the investment and finance companies. Life insurance has grown very rapidly. The demand for long-term assets is growing.

58. What the housing market least needs is increased government intervention. Housing finance liberalization and the rapid expansion of the mortgage market should contribute powerfully to the rapid demise of the chonsei which has outlived its usefulness and has such negative effects on the rental markets. The pursuit of public policies based on the fragmented thinking which has characterized past directed credit policies should be changed. For instance, recent proposals for large public rental programs ignore the large benefits of genuine housing finance reforms and should be integrated with them. Similarly, there is ample reason to review the intent and effects of physical planning

regulations. Price stability and housing finance liberalization can then be expected to have favorable equity effects.

59. Finally, while the evidence is that there has been under-investment in housing in Korea, this does not mean that urbanization in Korea has taken place in a bad way. The urban performance of Korea remains remarkable: it has absorbed large populations quickly and at improving standards. In addition, a total look at overall national economic growth is needed to determine what alternative intersectoral allocation patterns might have been feasible and maintain East Asian style high growth. Is under-investment in the urban sector the price to be paid for achieving high growth rates? This paper could only raise the issue. Asian cross-country comparisons should also be valuable. On the other hand, there is no doubt that financial stability and an efficient mortgage finance system will greatly improve the intersectoral allocation of resources and achieve greater equity.

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