

The Long Road to Housing Reform

Lessons from the Chilean Experience

Eduardo Rojas

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Abstract

Chile's housing policy is widely regarded as a success. For almost a decade, new construction has been above the level required to provide houses for new families and replace obsolete structures. This raises hopes that within the next decade all families in Chile will occupy dwellings that comply with minimum quality and service standards. This is no small accomplishment for a country just entering the middle ground in the development scale. Moreover, the private sector is taking an increasingly active role in housing production and financing. This too is a significant achievement considering that in the 1970s most housing was built and financed by the government. Further, government assistance is effectively reaching the poor, and most public resources are benefiting low-income households. Confidence in the housing policy is high among the low-income population as expressed in their high level of participation in a housing savings program and by the absence of land invasions.

These accomplishments are the result of a long maturation process in the Chilean housing sector. Fifty years of government policy have consolidated the legal, institutional, and entrepreneurial foundations of the current housing production and financ-

ing system. Several success factors can be identified: an integrated sector approach (which incorporates the housing needs of all income groups); an efficient subsidy system (the result of a long process of experimentation); and reforms of the general banking system and the social security system (which created strong institutions to intermediate the financial resources accumulated by pension funds and life insurance companies).

Even with its accomplishments, Chile's housing sector still faces significant challenges. Improvements are needed to more effectively mobilize the resources devoted to housing. The lack of coordination between housing and urban development policies is becoming a major liability for both efficient housing production and equitable urban growth. Direct government involvement in house construction and home financing enforce uniformity in design and repayment schedules failing to fully meet the diversified demand of the target households and to fully mobilize the repayment capacity of beneficiaries. It is suggested that it may be time for housing policy to move beyond this basic approach introducing more flexibility through greater market participation in low-income housing.

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Fifty Years of Housing Sector Development

THE EVOLUTION OF HOUSING POLICY

The early years, housing as a partial welfare pre-occupation. Public concern with housing is long dated in Chile. As early as 1906, the government enacted legislation to create Workers' Housing Councils that embarked on housing projects to improve the inadequate dwellings available to moderate-income households through private rentals. Coverage was minimal when compared to the size of the potential demand and a great majority of low-income families did not benefit from the program. The average number of dwellings initiated in the 1943-58 period was less than 6,000 per year.¹

A more encompassing effort was that of the 1950s and 1960s when a broader institutional framework was established. Legislation providing incentives for private investment in housing was introduced in 1948 and 1959, and a public institution created in 1952 to build affordable housing with public funds. Urban development laws requiring municipalities to adopt master plans and special ordinances to regulate low-cost land subdivisions also date from this period. A technical agency to supervise the quality of construction, an essential requirement in a seismic country, was also established. However, these efforts proved incapable of supplying the number of new homes required by a rapidly urbanizing population.² Government subsidized housing ended up benefiting a small group of households while the majority of low-income families continued to live in substandard dwellings.

¹ Housing construction figures are taken from Bravo (1993) Annex 2.

² The urban population increased from 58.4% in 1950 to 83.3% in 1992. The rate of growth of the total population only dropped below the 2% mark in the 1970s, thus the cities grew at annual rates of over 2.5% during the 1950s, 1960s and 1970s. Housing demand grew at higher rates given that the annual growth rate of household formation remained close to 3% during this period.

Seeking an integrated response. In the 1960s, the government implemented a more integrated housing policy that attempted to provide housing solutions to all segments of the income distribution via a combination of publicly and privately financed schemes. The institutional cornerstones of the policy were the creation of a Ministry for Housing and Urbanism (MINVU) to set policy and manage public funds, the promotion of a culture of savings in low-income households through the Popular Savings Program (PAP), and the establishment of Savings and Loans Associations (S&L). Public funds were allocated to MINVU to build low-cost houses that were sold to low-income households under several subsidized loan schemes adjusted to households' needs, savings under the PAP program and repayment capacity. The S&L captured savings from middle- and upper-middle income households and used them to finance mortgage-backed loans for home purchase. Indexation of loan principal and payments helped the system to operate in an inflationary environment. However, it was incapable of providing all the housing required by the rapidly growing urban population and finally succumbed during the inflationary and highly recessive mid-1970s, in no small measure due to the term risk implicit in its funding structure (short-term deposits financing long-term loans). Rural housing did not rank high in the priorities of the MINVU and was left to agricultural development and peasant support organizations. Needless to say that little was accomplished and most of the rural population continued living in poor housing. Total house production increased to a yearly average of 8,000 in the 1958-70 period, still insufficient to satisfy needs.

Housing as a "right." The Government of Popular Unity (1970-1973) extended the government's commitment to provide housing by stating that adequate housing was a right and that the government had the obligation to provide it. Consequently, the early 1970s witnessed a significant public effort to provide housing through government projects. This taxed the government's institutional and financial capacity and put to test the capacity of the construction industry. Resource constraints prevented this

policy from making a significant dent in the dismal housing conditions of the poor. Although housing starts reached historic records, actual delivery of finished houses (on average, just over 9,000 a year) was less impressive. Many projects remained incomplete for lack of building materials or financing.

Land invasions, the systems' safety valve. A real but undeclared policy of the late 1960s and early 1970s was tolerance of land invasions. Official data indicates a growing incidence of invasions in this period, growing from less than 10 in 1968 to more than 220 in 1970 (Fadda and Ducci 1993). Another source of substandard housing was government sponsored incomplete land subdivisions. This reduced overcrowding in the existing housing stock but created neighborhoods that required later interventions to improve sanitary conditions and provide secure tenure. Since 1983 the central government has financed a Settlement Upgrading Program that is executed by local governments. This program has been partially financed by the Inter-American Development Bank. To date it has almost eradicated substandard settlements. The military government that took over in 1973 severely repressed land invasions closing this mechanism of land access for the poor. The absence of alternative means to acquire land, in conjunction with the saving requirements and long waiting periods of the government sponsored programs, forced large numbers of new households to share homes (Necochea 1987). Over the years, the result was a sizable overcrowding problem. According to McDonald (1994), overcrowding affected over 600,000 households.

THE LIBERAL REFORM AGENDA

Guiding principles. Starting in 1977, the government undertook a thorough reform of the housing sector based on the neoliberal ideas used to reform other sectors of the economy. Housing production and financing was to be left to the private sector with the government acting as a facilitator. The historic difficulties encountered by the market to satisfy the needs of the low-income population were considered to reside mostly in the insufficient purchasing power of these households. Therefore, the State, playing a subsidiary role, was to help households in need, supplementing their purchasing power with up-front subsidies while private banks would provide complementary financing. Middle-

and upper-income households were to find financing in private banks. The securitization of mortgages was envisaged as part of the development of private long-term housing financing, as capital markets became wider and gained in depth. In 1978, the government introduced complementary changes in urban planning that significantly de-regulated urban development. Rules for incorporating land into urban uses were simplified and land use regulation made more flexible to allow urban growth to proceed according to market trends.

Implementation adjustments. The reforms were conceived to unleash the allegedly repressed potential of the private sector to finance and build houses, and to target government support to the households with limited access to private financing. The new policies were put into practice in a period of low economic growth. Thus, their aim was also to boost the economy through new housing construction. Consequently, no attempt was made to support the resale, rehabilitation and improvement of the existing housing stock, or to support rental housing.

The original concept was modified repeatedly to accommodate the needs of the transition. A few examples illustrate the point. Initially, subsidies were granted to a wide range of households maintaining the support accorded previously to middle-income households in order to ensure a minimum level of demand for privately produced houses. This distorted the original objective, which was focusing public resources only on households in the lower end of the income distribution structure (these distortions were largely removed in later years).

The government also had to assume a more active role than that originally envisaged when the lack of interest of developers and banks to build and finance low-income housing became apparent. To this day, the MINVU directly contracts the construction of low-income housing with private companies and assigns the houses to beneficiaries registered on a national list of applicants. Further – in a significant departure from the original objective of transferring to the private sector the full responsibility of mortgage financing – the government has been providing the supplementary loans required by low-income beneficiaries to pay for the homes as no banks are yet interested in financing them.

The Chilean Housing System: A Case of Successful State Intervention

PRAGMATIC RESPONSE: STATE INTERVENTION WITHIN A LIBERAL IDEOLOGY

After much trial and error a three-tier housing financing and production system has emerged. The system includes:

- *Government-produced housing* (contracted out to private construction firms) distributed to low-income families with heavy subsidies and direct government loans;
- *Government-assisted housing*, a mixed system which pivots on nonrefundable cash vouchers supplied by the government, and supplemented by private bank loans, helping middle- and low-middle income families to finance houses also built by private developers; and
- *Privately financed housing* that allow upper middle- and high-income families to buy houses built by private developers.

The programs that support *government-produced housing* are two-pronged. The quantitatively more important is the Basic Housing Program (BH) (see Table 2) that provides a small, complete house financed through beneficiaries' savings, government subsidies and a government loan. The Progressive Housing Program (PH) provides beneficiaries with a fully serviced housing lot and a core house.³ This latter program caters to very low-income households (earning below US\$100 per month) that are unable to fulfil the savings and loan repayment requirements of the Basic House Program. Therefore, the Progressive Housing Program has lower saving requirements than the Basic Housing Program and does not require beneficiaries to make payments after the lot is assigned. The program also allows organized groups of beneficiaries to apply for the subsidy.

Both programs select beneficiaries from a national list of applicants using transparent procedures. The

Table 1 Housing finance system
(figures in US dollars)

Type of housing	Income range US\$/month	Price range	Financing		
			Savings	Loan	Subsidy
Government-produced	0 220	4,200 6,900	240 300	0 2,400	3,960 4,200
Government-assisted	221 1,680	7,000 45,000	300 4,500	4,000 38,700	2,700 1,800
Privately financed	1,681+	Available loans from private banks 5 to 20 years - indexed - 9% to 12% interest - 25% down payment			

Source: Annex

Table 1 describes the basic characteristics of the Chilean housing subsidy system and the Annex contains details on the different subsidy schemes.

³ Core house refers to one room plus bath with all the utilities on a fully serviced lot. This allows the beneficiaries to settle on the lot while they complete construction of the house using self help or community-help systems.

procedure in use is based on assigning points to applicants on the basis of savings (amount and time), income level, and housing needs (family size, current housing conditions). Dwellings are assigned yearly to households at the top of the national list. As stated before, the government could not find private developers willing to supply basic houses and progressive solutions. Also, developers were unwilling to provide them on a turnkey basis. Therefore, the government embarked on the direct production of houses acquiring land and contracting the construction of BHs and PHs with private firms. The government completes the cycle as developer by distributing the houses directly to beneficiaries. Confronted with the lack of interest of private banks to provide the small loans involved in the financing of Basic Houses, the government is providing the loans directly through the MINVU. The portfolio of loans thus created has consistently carried high arrears.

The multilateral development banks contributed to the development of these programs. The World Bank supported the Basic Housing Program with a loan whose main thrust was to improve the financing mechanisms already in place. The elimination of the arrears in the government portfolio, the privatization of loan servicing and the incorporation of private banks were critical goals that ended up largely unfulfilled. The Inter-American Development Bank assisted in the design and initial implementation of the Progressive Housing Program. A key design feature of this program was the transfer of the dwellings to beneficiaries on the basis of a minimum initial contribution and without any other repayment obligation. This enables the beneficiaries to devote their savings to improving the core house provided by the program.

The *government-assisted* programs that provide partial financial support for privately produced houses include several lines of action, the most important of which is the Unified Subsidies Program (USP). This program issues cash vouchers that enhance the ability of households to acquire debt. In so doing the program assists households to buy dwellings built by private developers.⁴ The Special

⁴ The Unified Subsidy program operates through a voucher system. This is one of the well-known and widely copied features of the Chilean housing system.

Workers Program (SWP) provides direct subsidies to organized groups with either larger savings capacity than that of the basic housing beneficiaries or with assistance from other sources (employers, NGOs). The Rural Housing subsidy provides low-income rural families with access to a very basic shelter (almost for the amount of the subsidy) or to a better quality home if the household can obtain a loan. The Urban Renewal subsidy promotes the renewal of deteriorated sections of inner cities. This program provides larger subsidies because urban renewal projects are more costly than greenfield projects. Eligibility criteria for this latter subsidy involves not only the applicants (in terms of savings and capacity to repay a loan), but also the areas where the house is located (it must be in an area slated for renewal). There is also a subsidy scheme to assist households interested in renting. The program is designed to help families that need housing urgently but do not have savings. Lease-purchase agreements with private leasing companies receive government assistance through subsidies covering between 5% and 8% of the final cost disbursed in up to 240 installments as lessors progress in paying off their lease-purchase agreement.⁵

The system is designed to achieve good vertical equity, providing a proportionally larger subsidy as the cost of the house decreases (see Annex). It is also designed to encourage the mobilization of household savings. The smaller the subsidy requested at registration, the larger the probability of

Vouchers are issued yearly to beneficiaries for the total amount of the corresponding subsidy. Upon settlement for a house, the beneficiary endorses the voucher to the developer as part of the payment. The remainder of the house price is covered by the beneficiary's own savings and a mortgage loan provided by a private bank. Originally, cash vouchers were to be used to purchase new houses and several restrictions were imposed on their use to purchase existing dwellings (the objective was to boost the construction industry). To date most restrictions have been lifted and the vouchers can easily be used to buy existing houses.

⁵ Not all vouchers are cashed before their expiration date because some beneficiaries may be unable to find a suitable house or secure a loan. In the twenty years of operation of the Unified Subsidy Program only 55% of the vouchers issued have been cashed.

obtaining it, thereby encouraging applicants to opt for the smallest possible subsidy in each range (and maximizing household contribution per unit of housing financed). Savings, as a measure of individual effort to procure a home, rank high in the criteria for allocating subsidies. Current mechanisms for encouraging savings include the requirement that applicants open savings account in private banks and comply with a savings plan.⁶

Facilitating *private financing* for housing is part of the wider reforms of financial intermediation and social security. The universal banking system is, to date, the main originator of housing loans that are securitized and sold in the capital markets. Two instruments exist. The first to be implemented (1976) was the indexed Mortgage-Backed Bonds (MB) that are issued as an obligation of the originating bank and sold to investors in the Stock Exchange.⁷ Endorsable Mortgage Credits (EMC) were introduced more recently (1996) to be issued by banks and mortgage credit companies. These are financial assets backed by first mortgages endorsed by the mortgage originator that transfers to investors the principal and interest risk of the loan with the property pledged as collateral. The availability of these financial instruments and the demand for them created by institutional investors (life insurance companies and private pension funds) the mayor purchasers of these long-term obligations, form the backbone of mortgage financing in Chile.

⁶Savers enter in a contractual agreement to make monthly deposits over a period of time to reach a given amount of savings. Savings earn a real interest rate. Private banks verify compliance with the contract and inform the MINVU to certify subsidy eligibility. At the end of 1997 there were 1.3 million accounts with accumulated balance of US\$680 million and a contracted eventual savings of over US\$1.8 billion (Pardo 1998). The fact that not all savers meet their target savings helps to ration housing subsidies given that the number of savings accounts open every year is much larger than the subsidies available.

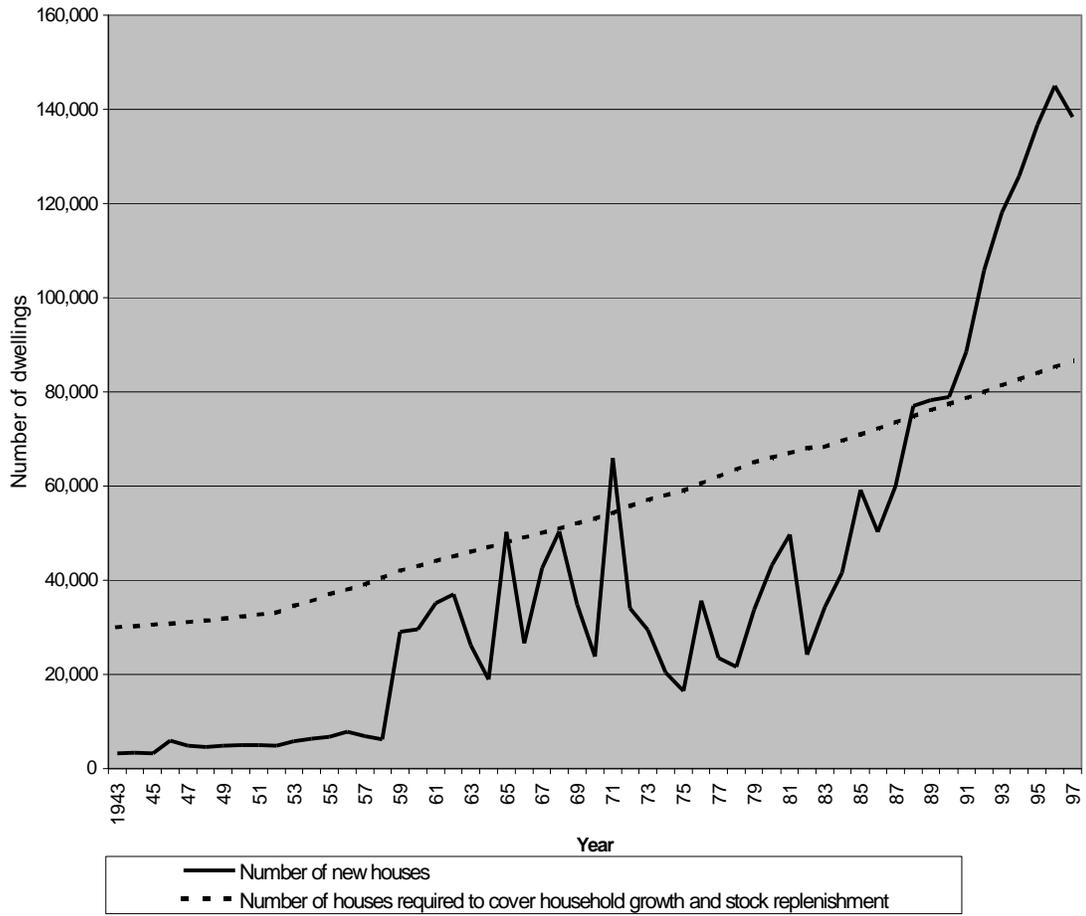
⁷ All mortgage-backed loans in Chile are denominated in a unit of account, the *unidad de fomento* (UF). The value of the UF is fixed daily by the Central Bank and follows inflation very closely.

HOUSING PRODUCTION

One of the most impressive accomplishments of Chilean housing policy is the sustained increase in the number of dwellings built. Figure 1 shows new housing construction trends in the last fifty years and the increase in production attributable to the policy under analysis.⁸ The number of new dwellings completed grew from 79,000 in 1990 to 138,000 in 1997, a 75% increase (see Table 2). As can be observed in Figure 2, a significant increase in **government produced** houses explain the growth of total housing production in the early 1990s. This originates on the resolve of the newly elected democratic government (Aylwin Administration, 1990-94) to control land invasions by accelerating the solution of the housing problems of low-income households. It is notable that this increment in production was attained without expanding MINVU. From 1993 to 1995 **privately financed** housing construction increased almost three-fold accounting for most of the sector's growth. The volume of **government assisted** housing showed little change during the period (fluctuating between 40,000 and 44,000) reflecting the stable volume of resources allocated by the government to assist middle- and lower middle-income households. It is worth noting that private financing plays a significant role in financing government-assisted housing, since the Unified Subsidy Program covers less than 25% of the total cost of the dwelling (see the Annex for details on the levels of subsidy for each of the government assisted housing programs).

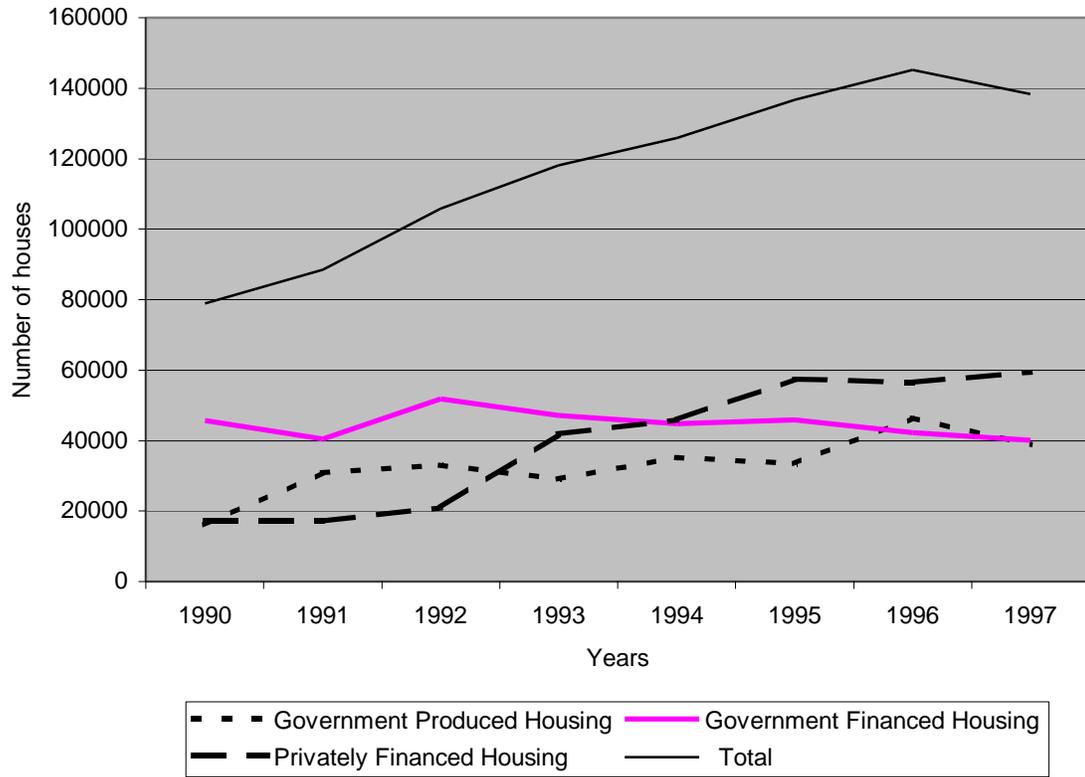
⁸ Data taken from Bravo L (1993) Annex 2. The number of houses required to meet household growth and stock replenishment were estimated based on the rate of household formation counting one new house for each new household and adding restocking needs assuming that each year 1% of the housing stock is lost.

Figure 1 New housing production 1943-1997



Source: Bravo (1993) and calculation by the author

Figure 2
Housing production 1990-97



Source: Table 2

GOVERNMENT INTERVENTION

A more detailed analysis of the concrete modalities adopted by government intervention sheds light on little known aspects of Chile's housing policy that while contributing to increased housing construction, generate implementation rigidities and potential resource allocation problems.

Large government intervention in the housing market. The production figures indicate that, notwithstanding its liberal origins and private sector orientation, Chilean housing policy leads to widespread (although declining) government intervention. To date the government determines the characteristics of more than half (57%) of the houses built (in 1990 this figure was 79%) either directly (contracting the construction of 28% of the total number of houses) or indirectly (determining the maximum price of an additional 29%). Unsubsidized home production, that is free from government interference, accounted for 43% of the total in 1997, the result of steady growth from a low of 22% in 1990.

Rigidities of the government's housing production machine. Under the current system, the government directly supplies dwellings to beneficiaries with incomes below US\$220 who are selected from a national list of applicants. These households occupy the two lowest income quintiles of the income distribution structure that concentrate almost 45% of the population. The direct production of houses through the Basic Housing (BH) and Progressive Housing (PH) Programs is an anomaly in the conceptual design of the policy that was necessary because of the lack of interest of developers in providing housing for this segment of the population. As a result of these programs, MINVU is today the largest developer in the country, annually purchasing land, contracting construction, and delivering more than 40,000 houses (more than 30% of the total number of houses built each year and almost 20% of the total square meters of residential building). This level of activity has a significant impact on land prices and the urban development process. Political commitments to build a large number of houses annually make MINVU reluctant to modify the direct house production system notwithstanding growing indications that it is not allocating resources efficiently. The rigidity required by mass

production leads to the systematic repetition of housing models in the urban periphery. This creates a situation in which many applicants either get too much or too little housing and usually in a less than desirable location. Moreover, maximization of the number of houses built with limited resources put quality standards to the test. There are many indications that government-produced housing creates of a housing stock of poor quality. (Rojas and Green 1995).⁹

High arrears in the government's loan portfolio. When confronted with the lack of interest by private banks to enter the low-income lending market, the government opted to provide complementary loans to beneficiaries of the Basic Housing program through the Ministry of Housing. The US\$2,400 loan is amortized in 12 years with a preferential interest rate of 7% per year.¹⁰ Government lending activities are plagued with arrears problems. Even after several renegotiations, 60% of the loans are still in arrears of over three months. The high arrears remained even after the government contracted-out the collection process. This situation is not directly related to the inability of households to make the payments, but is the consequence of moral hazard built into the system of direct government loans. There is the general feeling among beneficiaries that government loans need not be repaid. This impression is further enhanced by the government's reluctance to evict beneficiaries in arrears for fear of a political backlash, and by the many renegotiations of loans in arrears made in the past.¹¹

⁹ Complaints by beneficiaries are common and students of the Chilean experience often wonder if the stock of houses being produced will have the assumed fifty years of useful life. In 1996 almost 10% of the government contracted houses under the Basic House Program in Santiago did not withstand well a severe winter storm. Roofs and walls leaked due to the poor quality of the materials and workmanship used in their construction

¹⁰ Real commercial interest rates for 12-year mortgages ranged from 17% to 8.5% in the 1979-1997 period.

¹¹ Between 1979 and 1997 the government embarked on loan renegotiations with beneficiaries at least seven times. In most of these exercises old mortgage payments were pardoned in exchange for payment of the last installment and the promise of good behavior in the future. Sustained incapacity of the government to improve the

This situation turns the loans into de-facto subsidies for those who default. When added to the already high subsidy that beneficiaries of this program receive, this additional unintended subsidy becomes highly regressive (Basic Housing beneficiaries end up receiving a subsidy that is 50% higher than that received by Progressive Housing beneficiaries who have lower incomes).

PRIVATE SECTOR INVOLVEMENT

Private sector participation in the production and financing of housing has risen steadily. This is, in part, the result of housing policy, but as will be discussed further below, interventions in the housing sector alone do not fully explain the outcome. To a great extent they have been made possible by radical reforms in the financial sector and the social security system that provided the institutions and the funds to support growing private sector involvement in housing finance and construction.

Growing private sector involvement in housing.

The data in Table 2 indicates that the private sector has carved a niche for itself in the Chilean housing sector. As a result of the country's growing prosperity, this niche is expanding rapidly. Private sector activity has systematically expanded to capture the growing unsubsidized housing market resulting from high employment rates, consumer confidence and stable interest rates. Privately financed housing construction grew threefold from 20,000 units in 1992 to almost 60,000 units in 1997. This increase met a growing demand for new housing propelled by real salary increases and the availability of long-term mortgage financing. In the 1987-94 period, average per capita household income grew by almost 50% (World Bank 1995) and the value of mortgage-backed housing financing traded in the capital markets doubled (Pardo 1998). By all accounts this is an impressive increase. However, the slowdown of the Chilean economy in 1998 may reduce the future rate of growth of this sub-sector.

situation strained relations with the World Bank during the execution of a loan in support of the Basic Housing Program. The problem did not affect the IDB loan in support of the Progressive Housing Program that was purposely designed without direct loans.

Specialization and competition, two forces pulling the construction and real estate development industry in different directions. The stability of housing policy has made it possible for developers and builders to specialize while stiff competition is affecting the quality of housing. From the initial stages of implementation of the new housing policy, private developers showed interest in participating in the higher priced homes eligible for the Unified Subsidy Program. Today, several developers specialize in the construction of dwellings that fully comply with the program's price requirements. During the last decade, they built between 20,000 and 22,000 houses annually. The allocation of a stable amount of government resources to the program over the years contributed to the specialization of the developers. Entrepreneurs interested in this market know in advance the number of subsidy vouchers that will be issued every year in the different regions of the country.¹² The stable flow of financing from the government is a significant feature for entrepreneurs interested in this segment of the market given the long gestation period of real estate projects. The other side of the coin is that this market has become very competitive. As a result, cost controls and access to suitably priced land has become key success factors. The quality of new homes has suffered as profit margins narrow and inducements for private developers to improve quality are lacking.¹³

Suburban bias, the expansion of the urban fringe. MINVU's direct housing production has a significant urban impact in that it leads to construction in urban fringes where land costs are lower. Chile's housing policy also promotes the horizontal expansion of cities by private developers. Cost considerations and consumer preferences have induced the

¹² The voucher system generated new business for entrepreneurs charging developers a fee for forming groups of beneficiaries with similar subsidies and repayment capacity.

¹³ To be sold in the market, new houses require municipal inspection and approval. This review focuses on structural soundness, safety and compliance with land use and urbanization regulations but does not cover quality of materials and workmanship. Individual buyers do not have the technical knowledge to assess the quality of construction.

private sector to build mostly single family houses for this market. The cost of land is a large component of affordable housing, often representing up to 40% of total cost. Seeking to reduce costs, developers offer houses in peripheral locations where undeveloped land is less expensive, greenfield projects allow greater control of costs and make possible the short delivery schedules required to reduce financial costs. Lot sizes have decreased as land prices increase even in the periphery. Therefore, there is an implicit inducement to continue expanding the fringe of urbanized lands as this strategy provides land that is inexpensive and easy to develop.¹⁴ Housing construction in urban renewal areas still represents a small fraction of all new construction (1% of total) in spite of the availability of special subsidies for new or remodeled houses in designated areas. This can be attributed to the greater difficulties of securing developable parcels in the inner city and execution problems of the generally less predictable urban renewal projects.

The critical role of social security and financial reforms in expanding private housing finance.

Chilean's housing policy has successfully mobilized private investment. For the last ten years, in addition to the complementary financing provided to the 20,000 houses that on average benefit annually from government assistance, the capital markets have provided funds for the majority of the units entirely financed by the private sector (that reached 60,000 in 1997). Since the 1976 reform established the indexed mortgage backed bonds (MB), the banking system has been the main originator of housing loans. More recently, mortgage credit companies have begun originating mortgages and selling them in the capital markets. A recent study indicates that by the end of 1997 there were more than 440,000 housing finance operations originated by 15 banks (Pardo 1998).

The significant development of private mortgage financing in Chile was made possible by financial market reforms introduced after the 1982 banking crisis, and by the 1981 reform of the social security

¹⁴ Only recently (1997) the Government introduced some restrictions to the incorporation of land to urban uses a process previously subject to one of the more liberal land development policies in the Western world.

system. The former strengthened the general banking system that originates most of the mortgages the latter greatly increased the supply of long-term loanable funds. Strong banks support the credit rating of mortgage backed bonds since they are obligations of the issuing bank. As stated previously, recent financial reforms allowed the formation of mortgage credit companies and the issuing of endorsable mortgage credits (EMC). The formation of private pension funds to administer worker and employer contributions to individual retirement funds created a powerful institutional investor in Chile's capital markets. Further, the system enlarged the role of life insurance companies that provide disability and survivorship insurance and sell annuities to retirees. These investors have a natural appetite for long-term securities that match their obligations. In 1997 mortgage bond holdings had a value of US\$10.6 billion. This is a significant increase from the 1986 level of US\$2.2 billion. Originating banks held US\$2.8 billion in MBs while most of the rest (US\$7.4 billion) was held by private pension funds and insurance companies (60% and 34% respectively). Today mortgage bonds are widely accepted in the Chilean capital market; however, Pardo (1998) reports that in the early years, the Central Bank had to create a purchasing power for MBs in the face of investor reluctance to buy them.

The growth of pension funds and the expansion of the insurance industry ensure the availability of funds for expanding housing finance. Assets in pension funds have grown from US\$299 million in 1981 to US\$31.1 billion in 1998, equivalent to 41% of GNP. Future growth is expected to increase the accumulation of assets held by pension funds to 53% of GNP by the year 2015. There is ample room for expanding the share of mortgage-backed securities in the portfolio of pension funds, given that currently they represent only 16% of total assets. According to one estimate the demand for securitized assets originating from institutional investors in Chile may be over US\$12 billion a year.¹⁵ In the short term, the major limitations to meet this demand may come from the lack of experience in solving the practical difficulties of issuing securities (Pardo 1998).

¹⁵ Personal communication from Mario Abuhadba, Chilean consultant to institutional investors

Strengths and Weaknesses of Chile's Housing Policy

ACCOMPLISHMENTS

Improvements in the housing conditions of the population. The number of dwellings constructed in Chile has been growing for almost a decade, in marked contrast with the experience of the previous forty years (see Figure 1). This has had a direct impact in the housing conditions of the population. Government estimates suggest that by 1994, 82,000 dwellings were required each year to accommodate new families and to account for the obsolescence of the housing stock. Construction figures above this threshold, let's say 100,000 per year, help improve the living conditions of the estimated 800,000 families living in sub-standard housing (600,000 households sharing accommodation with other families and 200,000 living in homes that require improvements) (McDonald 1994). The target level of 100,000 new units per year has been surpassed during the last six years. Recent estimates indicate that in 1998, the nation's 14.8 million inhabitants occupied 4.05 million dwellings, a ratio of about 3.7 people per dwelling, a significant improvement over 1992 Census figures of 4.1 persons per dwelling.

Targeting of public funds. From the very beginning, the new housing system concerned itself with targeting government resources. Before the reform, middle-income and upper-middle-income groups were receiving an inordinate proportion of government subsidies, mostly as interest rate subsidies and loan defaults.¹⁶ The reform changed all this. Two developments were instrumental in improving targeting of government expenditures in housing. The

¹⁶ According to Castañeda (1990), in 1969 the poorest 30% of the families received only 22% of the subsidies while 30% of families in the middle-income bracket received 37% of the subsidies and the remaining 40% received 41%. This structure did not change significantly until the 1977 reform. Although the Allende Administration (1970-1973) increased direct government construction for low-income families, it did not eliminate the subsidies received by middle-income families on the mortgages financed by the Housing and Loans institutions.

first was the consolidation of a private mortgage-backed lending mechanism for middle- and upper-income households. The second was the introduction of the cash voucher system that created a programmed, transparent and up-front subsidy mechanism. The establishment of a unified, transparent and formula-driven system to allocate the vouchers created confidence in the system, protecting it from undue political pressures. Central to the definition of the formula are factors measuring social needs (family size, income, and housing needs) and the household's commitments to solving the problem as reflected in their saving efforts (time and amount of savings). These proved effective in screening households with the most pressing housing needs. Over the years the targeting mechanisms have been refined reducing the range of families able to apply for subsidies to devote more resources to households in the lowest deciles of the income distribution structure.

Appropriate targeting of government resources and the number of houses produced are the towering accomplishment of the Chilean housing system. Studies conducted in the mid-1990s suggest that beneficiaries of the Progressive and Basic Housing programs closely match the income distribution of the universe of applicants, indicating that the system is achieving horizontal equity (see Table 3). The difficulties encountered by households in the bottom of the income distribution structure to access the programs are apparent from the data in Table 3. This is the result of the savings requirements of the programs that discriminate against households without the capacity or discipline for saving.

Mobilization of private financial and entrepreneurial resources. The well-targeted state intervention in housing has not crowded out the private sector but opened opportunities for private business to expand participation. Private entrepreneurs, who compete to capture the market created by government vouchers and the availability of long-term financing in the capital markets, have seized this opportunity. As the figures show, the private sector has been expanding its involvement in housing co-

Table 3. Targeting of Progressive and Basic Housing Programs (in %)

Criteria	Factor	Progressive Housing		Basic Housing	
		Applicants	Beneficiaries	Applicants	Beneficiaries
Income	(a) Indigent	55.8	47.5	56.1	52.8
	(b) Poor	31.0	35.0	28.3	26.2
	Low-income (a) + (b)	86.8	82.5	84.4	79.0
	No low-income	13.2	17.6	15.6	21.0
Housing situation	Without potable water	55.9	66.7	44.3	60.1
	Without sewerage	57.6	72.7	44.8	62.8
	Without electricity	18.1	15.0	9.5	13.4
	Poor roofing	59.5	54.2	43.8	54.2
	Poor flooring	45.7	39.1	38.7	39.5
	Poor walls	71.0	65.5	58.9	69.1

Source: MINVU (1995) quoted from Rojas and Greene (1995)

struction and finance. Note must be made of the fact that this is not only the result of the housing reforms. The social security and financial reforms of the early 1980s played an essential part in boosting private involvement in housing financing supplying, respectively, the funds and the intermediary institutions.

Sustained confidence in government policy. The sustained high volume of affordable housing produced by the Chilean housing system provides low-income households assurances that a formal solution to housing problems is within reach. This explains the high levels of participation in the housing saving programs required by the government subsidy system and the absence of land invasions after the reinstatement of democratic government.

CHALLENGES

Notwithstanding its many accomplishments, Chile's housing policy has several features that are affecting its capacity to effectively satisfy an increasingly diversified demand and to mobilize more private

resources (especially from lower-income households). Further, housing policymakers have shown little concern for the urban impact of the policy, an omission that is affecting the attainment of quantitative targets and undermining the capacity of housing to increase the overall welfare of the beneficiaries.

Introduce greater flexibility into housing delivery mechanisms. Since it was introduced, the housing policy has focused on the attainment of quantitative housing construction targets. This prompts MINVU to focus on cost minimization leading it to adopt rigid production systems for the government supplied houses.¹⁷ Standardized housing types are reproduced endlessly and assigned to households in very different stages of the family life cycle. Fr-

¹⁷ MINVU's argument for continuing the direct contracting of Basic and Progressive Houses is cost related. Direct contracting, with payments to contractors during execution, allows the Ministry to produce Basic Houses for an average of US\$6,500 (US\$165 per square meter) one of the lowest building costs in Latin America

ther, new houses are located according to land prices with little or no reference to beneficiary's preferences. Despite the fact that it is the largest developer of the country, MINVU has yet to come up with a more demand-oriented approach that would allow it to better tailor its programs to the needs and effective purchasing power of the households it serves. The rigid financing structure based on one standard level of subsidy for one type of house prevents the system from adjusting household repayments to income. As a result, there are no assurances that the system is collecting all the resources that beneficiaries could potentially devote to housing. This design flaw is compounded by the system's inability to enforce repayment of the loans provided by the government. Greater flexibility certainly can be achieved but at a cost. Allocating more resources for the lower tier housing programs will facilitate diversification and allow better houses to be built. The larger subsidies that would be required are affordable for a fast growing economy and the price tag for the government may even be small if arrears of the loan portfolio are reduced. Gains will not only be felt on greater beneficiary satisfaction but also in reduced negative urban impacts.

The initial lack of government support for the purchase of existing dwellings prevented the smooth transfer of affordable houses that could have contributed to a more efficient allocation of the housing stock. This rigidity has been recently removed so improvements should be noticeable in the future. However, the long tradition of government support for home ownership, coupled with many years of rent controls (which were removed in 1979), has discouraged the growth of the rental market, crippling another mechanism for efficiently allocating the housing stock. This hampers the mobility of households. In Chile, families tend to remain in the same dwelling throughout most of the family life cycle. As a result, not only are resources misallocated (households do not adjust their consumption of housing to their needs), but the mobility of labor is also affected. A rent guarantee fund sponsored by the government may be instrumental in removing investor reluctance to build affordable housing for rent.

Effective mobilization of resources from government provided housing. Direct lending by the gov-

ernment has proven to be inefficient and unequal. Its inefficiency is evident in that it has not fully mobilized household resources for the acquisition of a house. The lack of equity stems from the arrears of the government portfolio of the Basic Housing Program. It leaves these relatively higher-income households benefiting from subsidies whose monetary value is greater than those received by the lower-income beneficiaries of the Progressive Housing Program. The low recuperation of the portfolio forces the government to finance most of the subsidies from annual budget allocations. Cash flows from the large portfolio of loans accumulated by MINVU (more than 180,000 loans in the last seven years alone) could be supplying additional resources to finance more subsidies and improve the quality of housing. The high arrears in the portfolio is forcing taxpayers to shoulder the full burden of the subsidies and perpetuates the cost minimization strategies that affect the quality of the housing stock. The rigidity of the housing delivery system also affects beneficiaries with untapped repayment capacity who may be willing to spend more for better quality houses, but who under current arrangements are forced to accept the standardized houses supplied by the government.

Private financing of housing has made sufficient progress in Chile to be able to meet part of the financing needs of low-income households. One option to initiate the transition to fully private financing is a government financed insurance fund to guarantee loans provided by private banks to households below certain income thresholds. This insurance, coupled with expeditious procedures for repossessing properties and the payment of processing fees that cover the costs of managing small loans, should attract banks to participate in this relatively large market (40,000 loans per year of approximately US\$2,500 each). The additional cost for the government (insurance payments and bank fees) will still be less than the cost of the widespread default currently affecting MINVU's portfolio.

Integration of housing policy and urban development policy. The quantitative success of the Chilean housing policy is exacerbating one of its major design shortcomings, namely, its lack of concern for urban impacts. Overriding concern for increasing the housing stock induced MINVU to place its pri-

ority on the number of houses built with the resources available to the detriment of the quality of the resulting urban environment. This approach led to significant losses of agricultural land (as cities expand horizontally) and to the creation of large low-income neighborhoods lacking in basic urban amenities.

Land development. The housing system has relied on the massive acquisition of land by private entrepreneurs in the late 1970s; a strategy made possible by the relaxation of land use regulations. Construction companies and developers bought large tracks of agricultural lands in the periphery of major cities. The lands were subsequently subdivided to cater for the demand created by government programs, the subsidy vouchers and later the growing demand for unsubsidized housing. Liberalization of land use and subdivision regulations in 1978 may account for the fact that most cities in Chile face low regulation-induced land-price distortions. This facilitated the implementation of the housing policy.¹⁸ Yet the liberalization also leads to an absence of incentives for improving efficiency in the use of serviced land.

Construction companies holding serviceable land successfully bid for government contracts to build dwellings for the Basic Houses and supplied houses within the scope of the different subsidy programs. The lands with the best amenities and better location were used to build houses for the Unified Subsidy Program market. Profit maximization led to cost minimization in production given the price caps enforced in the different subsidy programs. Developers preferred low-density housing schemes because of the lower construction costs of one or two story houses. Since average densities is 250 persons per hectare or lower (the equivalent to 50 homes per hectare) the almost 600,000 houses contracted by the government in the more than two decades spanning 1974-1997 required about 12,000

¹⁸ World Bank/Habitat Housing Indicators show that in Santiago, the ratio of the median land price of a developed lot at the urban fringe to the median price of undeveloped raw land averages 2.6. At the same time, the ratio of land prices for unserviced land with and without planning permission is 0.8. Planning permits do not delay development. On average they take only 3 months. (World Bank 1994)

hectares of urban land (Rojas and Greene 1995). In the Santiago Metropolitan Area alone this accounts for the shift of over 6,000 hectares of agricultural land into urban use.¹⁹ To this total, the consumption of land made by the Unified Subsidy Program and the upper-middle and upper income demand need to be added

Chile's housing policy is now faced with a growing shortage of land at prices compatible with the government programs.²⁰ The rapid exhaustion of serviced land in the periphery of the large cities is exacerbated by the lack of investment in trunk infrastructure during the years of fiscal austerity (1974-1994). Infrastructure investment levels are recuperating, but not fast enough.

Another related aspect of land consumption is the fact that the Chilean housing policy does not promote the renewal of inner cities. The current subsidy scheme for urban renewal, although useful, is insufficient to promote a significant urban renewal process. Developers face a major constraint in the fragmented land tenure structure in the inner cities. Chilean land legislation does not contain provisions for the government to facilitate the renewal process. Some of the measures that would work in this direction include government assistance with land assemblage or policies to discourage the speculative retention of land out of the market. As a result, the bulk of the urban development is taking place in the periphery of the cities leaving large portions of the central city underutilized.

¹⁹ The Santiago Metropolitan Area contains, in the periphery of the urban area, some of the most productive agricultural land in the country. The concentration of good agricultural land makes the problem significant. Estimates indicate that in the four decades of rapid urban expansion (1950-1990), Santiago consumed approximately 10% of all class I agricultural land existing in the country. From 1990 to 1996 the urbanized area of Santiago has been growing an average of 2,000 hectares per year.

²⁰ By 1995 developers reported that in the Santiago Metropolitan Area the cost of raw land represented the equivalent to 20% to 25% of the final cost of the Basic Houses. This contrast with their estimation that to make a 11% profit in the operations, the cost of raw land should not exceed 8% of the total cost.

Urban amenities for low-income households. Particularly in large cities, Basic Housing and Progressive Housing projects are clustered in the areas where land is less costly, usually the urban periphery of the less desirable sections of a city. This creates large low-income neighborhoods. The reduced purchasing power of the population prevents the emergence of privately provided urban services (education, health, and recreation). The public sector only partially responds to these needs. For instance, government housing projects include minimal community facilities, at most a meeting place and small playground. Municipalities expand the primary education and health infrastructure with grants from the central government but are not always able to provide for the operation and maintenance of the facilities. There are two main reasons for this. One is that the real estate is exempted from land taxes, the most important source of revenues for municipalities. The other is that the central government, which creates the problem in the first place with its decision to build the dwellings in a given municipality, does not contribute to the addi-

tional cost of service provision. The privately owned and managed urban transportation system usually reacts to the demand created by the new neighborhoods. The low fares charged allow low-income families access to the system but also force operators to extend the routes to generate sufficient revenue. This extends the travel time of the population living in the periphery. Average journey to work in Santiago was reported over 50 minutes in the early 1990s (World Bank-HABITAT 1994), and has probably worsened since.

The government faces the challenge of increasing its investment in the quality of the urban environment of the neighborhoods that it creates as a result of its low-income housing policies. This involves greater care for investment, operation and maintenance of education, health and recreation services in low-income neighborhoods. Adequate transportation services are also needed for low-income neighborhoods since they have a significant effect in the quality of life of the households.

Lessons from the Chilean Housing Experience

Chile's housing experience provides a wealth of ideas for policy design and implementation as well as sobering lessons concerning the costs (both in time and resources) that must be incurred to obtain such results.

One key success factor was the integrated approach to the whole housing sector adopted by Chilean reformers. The ensuing policy provided a response to all segments of the housing market. This allowed the targeting of government resources and the incorporation of private sector financing and construction capacity

The results attained in Chile are the consequence of many interrelated developments occurring in several sectors and over an extended period of time. Execution of key aspects of the 1978 housing sector reform were made possible by the level of development of housing and urban development legislation and institutions, a result of over fifty years of government concern. This is the case of the voucher system to distribute subsidies that rests on the operation of efficient bureaucracies. The impressive progress made in private housing financing is the result of the reforms introduced in the banking and social security systems that built strong general banks and accumulated long-term assets in pension funds and life insurance companies. The institutions emerging from these reforms, operating in a stable macroeconomic environment, were central to attaining the levels of private involvement in housing finance that exist today. However, the development of secondary markets for mortgages has proceeded at a slower pace than envisaged by policymakers. This is due, in part, to the lack of initial experience with capital markets. After almost twenty years, enough experience and actuarial information exist to now allow full mortgage-backed securities (like EMB) to increase their share of the market. Still, progress is highly dependent on favorable macroeconomic conditions characterized by low inflation, stable interest rates, rapid growth of the economy and reasonable growth of family income.

Privatization of housing production and financing came very slowly in Chile. It was not until the mid-1990s—after almost a decade of steady economic growth—that privately financed housing construction reached a level comparable to government assisted housing production. Improvements in family income supported this expansion. The growth of private house production has also benefited from the stable demand generated by housing vouchers issued by the government. Predictability of demand allowed developers to plan investments and specialize in specific segments of the market, increasing efficiency in a very competitive environment.

Government housing policy in Chile did not crowd out the private sector. On the contrary, by providing well-targeted subsidies to boost demand and by introducing financial and social security reforms, the government created the conditions for expanding private involvement in the financing and production of houses. However, private involvement has been slow and only took off in the second half of the 1990s after several years of high economic and income growth and macroeconomic stability. This suggests that housing policy alone cannot assure these results but require reforms of related sectors and favorable macroeconomic conditions.

The housing production and financing system that resulted in Chile seems today unnecessarily rigid. The early stages of implementation that emphasized production introduced the standardization of house design, maximum cost limits for subsidized houses and restricted entry procedures to the system. These rigidities, which were possibly considered a tolerable misallocation of resources in the early stages, may not be efficient today given the progress attained in private financing and production. The introduction of more flexibility in the Basic House program—for instance by allowing wider price ranges in eligible houses and the introduction of government-backed private financing more in tune with the actual repayment capacity of the households—should provide an incentive for private developers to produce for this segment of the market. Private production will diversify the types

of houses offered allowing greater freedom of choice to beneficiaries. The initial lack of support for home purchases from the stock (justified on the grounds that new housing starts promote economic growth) unduly retarded the development of this market. This deprived the housing sector of one mechanism to efficiently allocate the existing stock. Similarly, emphasis on owner-occupied housing retarded the development of rental housing, a segment that plays a significant role in providing flexibility for households to cope with changes in family structure and facilitates geographical mobility. Well-conceived housing policies should always include mechanisms promoting the conservation and adaptive use of the existing stock.

The lack of concern for urban development impacts is a major flaw of Chilean housing policy. Excessive reliance on the automatic adjustment mechanisms of the market explains the initial reluctance to use proactive urban development measures. Single-minded preoccupations with increasing the number of houses financed with a given budgetary allocation explain later reticence to incorporate except the most limited mitigating measures. As a result, the government is facing increasing land related constraints to put its housing programs into effect and the quality of life of beneficiaries of government-assisted housing is decreasing. Based on this experience it is hard to argue that housing policies

should be independent of urban development policies. On the contrary, they are but aspects of the solution of one problem, that of the quality of the habitat of the population. The key to improving efficiency in the allocation of urban land is ensuring that urban land markets convey the correct signals to developers concerning the true costs of low-density peripheral development. Also important is government involvement in facilitating the urban renewal of central sites. Measures to promote these objectives are amply discussed in the specialized literature and will not be reviewed here.

Implementation of an integrated housing and urban development policy requires a great deal of cooperation between the public and private sectors. Promotion of this cooperation requires an institutional setting that value and takes full advantage of the unique and complementary roles that each can play. This necessarily leads to more complex housing production and financing mechanisms than the ones observed in Chile. The Chilean housing policy rather schematically separated the private and public functions and the objectives of housing and urban development policies. This led to a situation in which the success of the housing policy in producing houses and attracting private investment has turned into a failure of the urban development objective to ensure good living conditions for the population.

References

- Bravo, L. and Martinez, C. (Eds). 1993. *Chile: 50 Años de Vivienda Social. 1943-1993*. Valparaiso: Universidad de Valparaiso.
- Bravo, L. (1993). "Retrospectiva de 50 Años de Vivienda Social" in Bravo L and Martinez C (eds), Op.cit, pp3-72
- Castañeda, T. 1990. *Para combatir la pobreza*, Centro de Estudios Públicos, Santiago, Chile
- Fadda, G. and Ducci, M.E. 1993. *Políticas de desarrollo urbano y vivienda en Chile*. Interrelaciones y efectos, in Bravo L and Martinez C (eds) Op.cit, pp74-111)
- Mac Donald, J. 1994. *¿Cuántas casas faltan? El déficit a nivel nacional y regional*, Documento de Trabajo N°16-94, Corporación de Promoción Universitaria, Santiago, Chile.
- MINVU (Ministry of Housing and Urban Planning). 1995. "Program Targeting Study," Santiago, Chile, (mimeo)
- MINVU (Ministry of Housing and Urban Planning). 1997. *Informativo Estadístico No229*, Santiago, Chile
- Necochea, A. 1987. "Los allegados: una estrategia de supervivencia solidaria en vivienda," *Revista EURE* 13-39, pp 85-99
- Pardo, C. 1998. "Housing finance in Chile. The experience of Primary, Secondary Mortgage Financing," Document submitted to the Conference "The Development of Mortgage Securitization in Latin America and the Caribbean" organized by the Inter American Development Bank, Washington, D.C., November 2-3, 1998.
- Rojas, E. and Greene, M. 1995. "Reaching the poor: lessons from the Chilean housing experience," *Environment & Urbanization*, 7-2, pp 31-49
- World Bank-HABITAT. 1994. *Housing Indicators*, 1994 edition, Washington DC
- World Bank. 1997. *Chile. Poverty and Income Distribution in a High-Growth Economy 1987-1995*, Washington DC (Report 16377-CH)
- World Bank. 1999. *World Development Report 1998-99*, Washington DC

