Urban Housing and Financial Markets: Some International Comparisons

By Stephen Malpezzi

The World Bank's interest in housing should therefore be no surprise. But development comprises much more than just efficiency and growth in GNP. The Bank's original motivation for financing our borrower's urban projects was concerned with poverty. Shelter and its associated infrastructure is one of those areas, like education, which cuts across concerns for both equity and efficiency. The Bank's involvement on the lending side began in 1972 with urban loans to Senegal and Turkey, followed after a few years by loans to Malaysia, Botswana, India, Iran, Tunisia and Jamaica.

Lending Operations: Bank-financed Urban Projects, 1972-89

The Bank's urban lending portfolio is diverse. It is by no means self-evident why we call urban we call urban, or, for that matter, why much of what we do not call urban is not called urban. Urban projects have included transport, municipal finance, small-scale enterprise and emergency reconstruction. Some projects have focused on improving (public sector) municipal management. Some integrated projects are so complex that it is hard for an outsider to see what they are focusing on at all. But the majority of lending operations focus on shelter—'sites and services', which started out as core housing which could be progressively developed, but which has evolved into low-cost land development and the upgrading of existing settlements. Housing finance lending started as a component of sites and services—small materials loans to encourage progressive development—but evolved into Bank analysis and support of larger housing finance institutions, with an emphasis on financial development per se as well as housing. Since the Bank's reorganisation 2 years ago urban shelter lending has been integrated with water, sanitation and transport, at least from an organisational point of view.

Much Bank lending in other sectors is urban in character—particularly industry and energy, but it is not stretching a point too far to note that almost every area in which the Bank is involved, including agriculture, ultimately has profound implications for urban development and, to some extent, housing.

While the Bank lends large sums of money for urban projects—some US$2 billion in the last completed fiscal year—this is a tiny share of investments in the sector. In most countries our money—and the government's money, for that matter—is less important than that of private investors. But government sets the rules of the game for those investors. Hence, we should always be more concerned with policies than with resource transfers per se.

Research and Sector Work

In addition to the lending programme, the Bank has an active programme of market and policy analysis carried out in the operational divisions ('sector work', in the
Bank's jargon), and of research. It is important to be able to analyse housing market and policy issues in terms of a rigorous analytical framework, and, in particular, to compare the efficacy of alternative government interventions in the housing market according to a common and comprehensive set of criteria. For the past several years there has been progress on a variety of research fronts.

(1) Survey data collection and analysis. Bank research projects on housing demand and finance in developing countries, the ‘City Study’ of Bogota and Cali, Colombia, and the Living Standards Measurement Survey are among recent efforts which demonstrate the uses of household sample surveys, and are primarily, but not solely, demand analyses of various kinds.

(2) Interview techniques. Semi-structured interview techniques have been successful in improving our understanding of supply side issues. Anthropological studies (Listen to the People) have yielded insights into the household production process as well as the incidence of benefits and costs of public programmes.

(3) Present value analysis. Traditionally applied by the Bank towards the end of the appraisal process to calculate rates of return for projects, cash flow models are also powerful tools to study policy issues. An important variant of these models analyses financial instruments and institutions.

(4) Land use models, land information systems and mapping. The Bertaud model is a land use planning model which calculates the costs and benefits of land use standards. Several other studies have focused on land regulation and pricing using other methods. Geographical information systems have many uses in studying cities in developing countries.

In any given study one or all four research approaches can be used. And of course there have been a number of excellent studies of developing country markets carried out by others which we draw on freely.

Recall that urban shelter projects were part of the shift away from public and council housing as a number of developing countries tried to reach down market and improve housing conditions for larger numbers of lower-income households. Given this point of entry for urban shelter projects, the Bank only gradually began to focus on the underlying productivity of housing investment, and to focus on the entire market rather than narrow segments affected by specific projects. For one of the first lessons of Bank involvement in the sector was that if the housing delivery system does not produce for the top and middle of the market, government programmes will never successfully target the poor. The next few paragraphs present a view of how markets work and their implication for programmes.

A FRAMEWORK FOR ANALYSIS: HOW HOUSING MARKETS WORK

Clearly some housing problems stem directly from poverty. Improving housing conditions which are bad solely because incomes are low must be accomplished by improving the productivity and incomes of the poor. But many countries which are succeeding in the task of general development find housing conditions lagging. Many countries at all levels of development find housing conditions worse than they need be because their housing markets function poorly.

Figure 1 shows a schematic diagram of how the housing market works. Inputs such as land, labour, finance, materials and infrastructure are combined by supply side agents such as landlords and developers to produce housing services. Home-owners and, to a lesser extent, renters are also producers, if they maintain and upgrade their houses. Relative prices inform producers of housing services about whether to provide more or less housing, and the input suppliers about providing more or fewer inputs.

The market for housing services per se can be well approximated as a competitive market. For the activities in the middle box, there are few barriers to entry or large economies of scale in most countries. This does not mean, of course, that anybody in a poor country can become a landlord or developer. But there are seldom so few landlords or developers that they exert significant market power, unless they also control inputs that are not competitive, or their numbers are limited—intentionally or not—by regulation.

The market for many inputs is not competitive, however: (a) their ownership may be so concentrated that owners can fix prices, as in some land markets; (b) large economies of scale may make the production of some inputs a natural monopoly, as with some types of infrastructure; and (c) government regulations may restrict the competitive al-

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**Figure 1: How Housing Markets Work**

<table>
<thead>
<tr>
<th>Inputs</th>
<th>Production</th>
<th>Demand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land, Finance, Infrastructure, Labour, Materials</td>
<td>Developers, Builders, Landlords, Homeowners</td>
<td>Renters, Homeowners (Income &amp; Population)</td>
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location of inputs, notably finance and serviced land.

It is worth emphasising that analysis of the competitiveness of the housing market, and of its input markets, depends critically on the conditions of entry and exit, and on the regulatory framework, as well as the existence or lack of economies of scale. There is little public policy can do to make a housing market or an input market more competitive by changing economies of scale; these are largely technically determined. There is a lot policy can do to affect conditions of entry and exit, and the regulatory framework. That is, the competitiveness of each market is partly determined by policies. Rather than bemoan a lack of competitiveness, where it exists, making markets more competitive is an important intermediate policy goal.

The implications of this analysis are clear. Problems in housing markets are often caused by problems in the input markets. Government actions that attack these problems directly are the right ones. Rather than adopt this approach, however, many governments intervene in production (the middle box). Governments that try to fix prices—for example, by rent controls—distort the signals being sent to the market and may exacerbate the original problem.

Note in particular that the comparative advantage of reliance on the private sector for some activities and the public sector for others does not hinge on either ideology or assumptions of, say, a frictionless market. On the contrary, transactions costs are endemic in the sector. One of the criteria for public or private provision is which incurs lower transactions costs.18

**KEY ISSUES**

This section largely follows the organisation suggested by the conference organisers, to facilitate comparisons among countries. Much of the data are simple cross country indicators in bivariate plots. It is not possible to infer causality from such simple models, but at least they provide us with stylised facts and motivate further study.

**Broad Context**

Figure 2 shows the growth of rural and urban populations for several recent years, with UN projections to 2000.19 Currently, in developing countries roughly half the growth in urban populations comes from rural to urban migration, and roughly half from internal growth. Annual growth rates for specific cities ranging from 2 to 7 per cent per annum imply large investments in housing, infrastructure and social overhead capital.

Often writers on LDC urbanisation leave the impression that such growth is unprecedented. While current rates are impressive, they are not without precedent. To take examples close to home, during the 19th century London and Glasgow were among large cities in Britain which sustained rates of 2-3 per cent per annum. New York City grew by 3-5 per cent per annum over much of the 19th century.20 And note that this was a time when net internal growth of cities was much slower; most of this growth came from migration. Comparing today’s cities and yesterday’s, migration was at least as strong during the industrial revolution; today’s LDCs have added impetus from internal growth.21

The aggregates in Figure 2 show total growth in levels. These aggregates mask significant regional variations, among other things. Figure 3 shows that urbanisation in Latin America is nearly as high as in Europe and North America, while in Asia and, especially, Africa, it is quite low. These rates in turn mask variation within regions; for example, urbanisation in China and India is quite low (21 and 26 per cent, respectively), while in East Asia it is quite high (77 per cent in Japan and 67 per cent in other East Asia).22

**Growth in incomes.** Figure 4 shows that there has been a wide range of growth rates over the past 20 years. No strong linear relationship exists between growth rates and endowments (GNP at the beginning of the growth period) but it does appear that the variance in growth rates is much smaller for richer countries. Only one country with per capita income above $1400 had a negative growth rate, while about 20 below $1400 were negative.23 Only one country with an income over $2200 had a growth rate much above 4 per cent, while 10

![Figure 2: Rural and Urban Population Growth](image-url)
poorer countries had growth rates between 4 and 8 per cent.

Fully explaining variation in these growth rates is another paper, or book, or perhaps a life's work. Here we will make only the crucial point that growth rates are more closely related to government policies—the 'rules of the game'—than endowments.

Taking GNP per capita at the beginning of the period as a measure of endowments we have already shown that there is no evidence in the simple numbers of a deterministic relationship. Figure 5 presents some rough and ready evidence on the relationship between policies and income growth. Agarwala (1983) has constructed indices of price distortion which are a convenient summary measure of the policy environment. Agarwala used quantitative indicators of distortions in: (1) exchange rates, (2) interest rates, (3) agricultural prices, (4) wages, (5) protection for manufacturing, (6) distortions in the overall price level, and (7) distortions in infrastructure pricing, for 31 developing countries, ranking each indicator in each country on a scale of 1 (least distortion) to 3 (most distortion). These can be summed, so the minimum score is 7 and the maximum score is 21.

The negative relationship between growth rates and distortions is obvious in Figure 5. Using the regression line through all points, the least distorted economies (score of 8 to 12) averaged growth rates of 3 to 4 per cent, while the most distorted averaged 0 to 1 per cent.

Of course GNP per capita is only one aspect of development. Education, political development and physical well-being are examples of other indicators that may be only weakly correlated with GNP. For our present purpose I shall look at only one other aspect, namely the distribution of income.

Figure 6 shows the roughly U-shaped relationship between the share of income group to the lowest income quintile in countries and the income level of the country.
This result, often called the Kuznets curve, implies that distribution seems to get worse, on average, before it gets better as countries grow. But again the relationship is not particularly tight.

Figure 7 shows that, in the aggregate, this so-called ‘trade-off’ between equity and efficiency may be overstated. Faster growing economies appear to have greater shares of income going to the bottom 20 per cent of the income distribution.

Figure 8 shows that, interestingly, countries with low levels of price distortions tend to have better income distributions, according to these measures. The average for low distortion countries (around 8-10 on the Agarwala scale) is for around 6-8 per cent of income to go to the lowest 20 per cent; for countries with Agarwala indexes around 18 the share drops to around 4 per cent. It is ironic that these price distortions are often justified by an appeal to distributional concerns. A counter-argument which could be made, however, is that these policies are a response to existing income distributions rather than a cause. These simple plots cannot by themselves resolve such an argument.

We note in passing that the distribution of wealth is, in general, more skewed than the distribution of income. Housing is the largest tangible asset of most households. Policies which affect housing consumption are thus among the most powerful redistributive policies. In many cases, as we shall see below, policies affect this distribution in unintended and regressive ways.

Finance and development. The relationship between financial deepening and development is well established. Figure 9 illustrates the relationship with a commonly used rough proxy for financial depth, namely the ratio of broad money (M2) to GDP.

Housing finance is a non-negligible share of total finance in many countries. Housing finance needs to be considered in the light of its importance as finance as much as its importance for housing. Again, I shall discuss this in more detail below.

Finally, I bring this and the preceding section to a close by examining some simple relationships between growth and urbanisation, and equity and urbanisation.

Urbanisation and development. Figure 10 presents the familiar correlation between level of urbanisation and GNP per capita (log scale). The growth of cities has accompanied urban development for the last 5000 years. This does not, however, imply a simple casual relationship. Rate of change in urbanisation and income over the past 20 years are at best weakly correlated, for example, Figure 11. But it is still true that in the long run developing economies urbanise.

Figure 11 also shows that the Kuznets U curve may hold, again weakly, over the range of urbanisation. However, given the correlation between urbanisation and development, and the similarity of the (weak) U curves, there is little to say about possible causation at this point.

Figure 12 shows that there is little clear bivariate relationship between urbanisation and income distribution, using these simple measures.

An issue which arises regarding urbanisation in a number of countries is so-called ‘urban bias’. Generally while many of the distortions discussed in Agarwala (among other references), such as overvalued exchange rates, inappropriate agricultural and infrastructure prices, high tariffs and so on, are demonstrably bad for the economy as a whole, some individuals benefit, more often urban dwellers than rural. Costs of such policies may be borne more by rural dwellers than urban (this is especially true of low agricultural prices). It has already been argued that such policies are accompanied by lower rates of growth and worse income distributions. It hardly seems likely that such policies would be good for urban economies in the long run, even if in the short run some benefits accrued to some urban dwellers. Urban economists have, generally, joined with others, in arguing against such policies.

One extreme version of the urban bias argument is that, since such policies may favour some urban dwellers, urban growth will be increased. Some have argued further that since, in their view, cities are growing faster because of such urban bias, the growth of cities should be reduced. But
even if the net transfers of such policies are
in the direction hypothesised, significant
effects on urbanisation would require: (1)
the transfers to be large relative to the
economy overall; (2) migration behaviour
and/or differential fertility in cities to be
elastic with respect to such transfers; and
(3) the benefits to some urban dwellers not
to be outweighed by the ill effects on urban
economies mentioned in the previous
paragraph. Point (1) may well be true for
a number of countries during significant
portions of the past two decades. The
evidence is against the second conjecture,
while there is little direct evidence on the
third, other than the simple evidence pre-
sented above that such policies might on
balance hurt urban economies.

In the event, Figure 13 shows no obvious
correlation between Agarwala’s distortion
indexes and urban growth rates. It should
also be noted that, in general, policies which
have attempted to slow down or reverse the
growth of cities have had little discernable
impact upon population growth but may
have had a larger (negative) effect on
economic growth.

Structural adjustment has greatly reduced
such urban bias as did exist. Even when
such distortions were more common, it is
not clear what the net terms of trade were
between town and country when fiscal
effects are counted and urban-rural
remittances taken into account. Even if the
transfers were large (as they probably were
in some countries) their effect on the growth
of the cities has been small (the correlation
between urban growth rates and Agarwala
indexes is zero). Anti city growth policies
never were a solution to urban bias, because
it never affected growth rates. The solution
is to reform the policies which induce the
transfers when these occur. An extra set of
distortions on cities neither reduces the
transfers nor affects city growth, but does
reduce productivity and urban standards of
living.

Housing demand. The structure of demand
in developing countries can be roughly but
fairly represented as follows. Within par-
ticular markets, demand is income inelas-
tic: most estimates using household hous-
ing consumption and incomes from cross
section data range between 0.4 and 0.6.
Across markets demand is elastic: using
city averages of housing consumption and
incomes as the unit of observation the elas-
ticity range somewhere between 1 and 1.6.29
Figure 14 presents a graphical representation of the above.

Less is known about price elasticities, partly because decomposing consumption into price and quantity is more difficult technically. Estimates by Malpezzi and Mayo (1987a) of around -1 are among the highest, though the particular technique used is subject to bias towards -1. Estimates from aggregate data over time also suggest a high elasticity (Ingram, 1984). Other estimates from cross sectional data suggest—0.4 as a reasonable lower bound (Mayo, 1981). Clearly more research is needed here.

The demand results above are from studies of developing countries, with a range of per capita GNP of roughly $300 per capita to $2500. There is some evidence that for developed countries cross section income and price elasticities within markets are similar; but evidence is mixed on the elasticity across markets and countries. Micro-data suggest that average housing consumption to income ratios are lower for developed countries than for Korea and some other higher-income developing countries, implying that the long run elasticity is less than 1 over some part of the range between the two groups. Data on housing investment analysed by Burns and Grebler (1976) (discussed below) are also consistent with this pattern. But time series data on several developed countries are more consistent with a higher, very long-run elasticity. The analysis is further complicated by the strong effects of tax codes and financing terms on housing user costs in the developed countries. Expanding cross country demand studies to the full range of countries, developing and developed, should be high on any future research agenda.

Housing supply. If supply is elastic in the very long run, housing supply should mirror the demand patterns discussed above. Figure 15 shows the plot of housing investment as a share of GDP (called SHTO in the literature since Burns and Grebler, 1976) and the quadratic regression line. Figure 16 shows the similar pattern of housing investment as a share of gross fixed capital formation (GFCF).

These graphs are very familiar to researchers in the field, but note that a slightly different graph gives a better approximation of the pattern over time. Given a constant growth rate, continuous time is approximated by a log function. Figure 17 shows that, according to the cross country average experience, over time a constantly growing economy's SHTO rises very slowly for quite some time; most of the 'action' occurs at higher levels of development.
Another important but under-researched area is housing from the existing stock. Other than the few studies surveyed in Ferchlou (1982) and Johnson (1987), very little has been done on filtering and other changes in utilisation of the existing stock. There is a useful literature on upgrading; for example, Jimenez (1982). Utilisation of the existing stock comes up particularly in the rental sector, discussed below.

With the oil, debt and other shocks to a number of economies, both show shifts downwards from the mid-1970s to the 1980s. Is this a temporary adjustment or a permanent shift? Structural adjustment has hit the cities hard, especially nutrition, health and education, but housing and infrastructure have also been hit. But it should be pointed out that ‘adjustment with a human face’ should focus on nutrition, health and education, since these cannot be deferred without incurring large costs. Housing investment can be deferred, but it is a fact of life that governments often face strong political pressure to pump up housing anyway. In a similar vein when infrastructure spending must be curtailed maintenance should be safeguarded.

Housing and the Capital Market

Housing is the largest asset owned by most households. Housing is always financed, in the sense that virtually all owners of housing capital must pay for their units over several periods. Even households which own their units ‘free and clear’ finance the unit in the sense that holding such a large asset has a financial opportunity cost.

But in most countries only a small share of this potential finance, roughly equal to the value of the underlying assets, is in the form of mortgages or other formal sector finance. Figure 18, from Goldsmith (1987), shows that in both developing and developed countries formal sector finance is only a small part of the total.20

Because housing is such a large item in household spending and wealth, access to mortgage finance can provide a strong incentive for people to save and invest. Savings in housing finance institutions, while generally used to provide mortgages, can become a large part of a country’s total savings, available for financing infrastructure and other non-housing projects. The housing finance system can also help to ensure that housing projects are repeated, as repaired loans provide money for new mortgages.

Consider the average house price to income ratio as a rough and ready indicator of the performance of the housing sector. In countries with less elastic supply for whatever reason, asset prices will be bid up. Let us assert, for the moment, that we observe a wide range of such ratios across countries, much wider than can be explained by underlying differences in housing demand (Malpezzi and Mayo, 1987; Buckley, 1989). In particular, assume they depend partly on the state of capital markets.

Figure 19 shows that the better the housing finance system performs, the lower are housing prices relative to incomes. Certainly housing finance is not to be considered the sole or even the most important determinant of such differentials, based on such simple bivariate correlations.21 But the pattern is clear.

Despite these potential benefits, few developing countries have widespread and successful systems of housing finance. Development planners often seem to treat housing more as a consumption good than an investment and fail to recognise either its potential for encouraging savings or the macro-economic links between it and other sectors of the economy. It is also clear that the development of housing finance institutions is strongly related to the general sophistication of a country’s financial system, which in turn is closely related to overall economic development. In addition, recent economic circumstances in many developing countries—rapid inflation, shifting terms of trade and slow growth have not been conducive to the development of housing finance institutions. Many have also had inappropriate lending and borrowing policies (often under the direction of governments) and have thus been seriously weakened within the past decade.
Table 1.
Housing finance and wage funds, Chile

Housing funds of one kind or another have been tried in a number of countries, particularly those with a tradition of directed credit. Experience in a number of countries which experienced high and variable inflation suggests that funds which are not fully indexed are not viable. For example, Chile has a large social security system, has also experienced macroeconomic stability during much of the past 30 years, and in the 1960s Chile’s public social security funds invested a large fraction of their assets in real estate and mortgages. Moreover, public funds were constrained in the terms they were permitted to offer; loans were long-term and, even when partially adjusted, interest rates were consistently below inflation. Wallich (1987) documents the severe difficulties this combination caused the public funds. The problems were compounded by the fact that the funds lent directly for real estate and mortgages, when they had no expertise in these kinds of retail activities.

In the 1930s and 1940s the Chilean funds lent long-term at fixed rates. A study found that for one fund, less than 14 per cent of principal and interest was recovered during the 1925-52 period. In 1952 a partial reform was undertaken; mainly, maturities were shortened, so that the funds could lose less of their real assets. Still, during 1952-59 their assets lost 60 per cent of their value through inflation. In 1959 more wide-ranging reforms were undertaken: loans were fully indexed, to a base index plus 4 per cent. But the index was badly chosen: the base was the consumer price index or change in wages, whichever was lower, guaranteeing that ex post rates would remain negative. Between 1959 and 1974, Wallich estimates that the funds lost about half their value. Finally, in 1974 the public funds were ordered to pull out of the housing finance system altogether, and to hold most of their assets as indexed government bonds.

During the same period, there were also privately managed pension funds subject to the same political constraints on the terms at which they were permitted to lend. Wallich reports that over most of the period the private funds chose to hold about the same percentage of their assets in real estate and mortgages, but that their performance was significantly better. Between 1950 and 1977, for example, the value of private pension fund assets increased ninefold, while the public funds only grew by 50 per cent. A lesson to be drawn from the Chilean experience is that real estate and mortgages are long-term assets which may have an important place in such a fund’s portfolio, but the terms and the regulatory framework under which the funds invest are critical.

The viability of housing finance institutions has often been jeopardised by governments which, in wanting to make housing more affordable have sought to keep down interest rates. Particularly during the 1970s, when inflation was rapid in most developing countries, many housing finance institutions lent at negative real rates of interest, which often led to considerable decapitalisation by the early 1980s.

Figure 20 shows the simple correlation between house prices and interest rate policy. While heavily regulated rates are often justified on the grounds of affordability, the simple correlation between regulation suggests that artificially low rates may be tied to inelastic supply and higher prices. While such a link remains to be demonstrated conclusively, an inevitable consequence of keeping mortgage rates below market rates is that loans are rationed.

Usually, the rationing benefits those who are perceived to have the lowest risk of default—often wealthier people or those favoured by government policy, such as civil servants, many of whom are also relatively well off. Subsidies to better-off households are not only unfair, they are also an inefficient way of achieving whatever housing goals they are believed to serve. Vouchers or housing allowances, or even up-front capital grants, could achieve the same production goals with far fewer distortions in resources allocation and far less harm to the viability of housing finance institutions.

Institutional viability (Tables 1 and 2) is not the only issue facing mortgage agencies in developing countries. They must also consider their menu of mortgage instruments; how to change the mix of mortgage instruments, terms and conditions as economic circumstances change; and how to evaluate the impact of alternative instruments on profitability, demand for credit, repayment or default. Other issues include the role of contractual savings schemes; who should get housing finance—lower versus higher-
Table 2. Housing Finance & Wage Funds, Brazil

Brazil is another country with experience of a large housing fund tied to the housing finance system under conditions of inflation (Sandilands, 1980; Silveira, 1987). Brazil has wrestled with pervasive inflation since the 1950s. Inflation ran at 20 per cent or more up until 1964, when a rate of 90 per cent was partly responsible for a military coup. The new government set up a new housing finance system, the Sistema Financeiro de Habitacao (SFH) in 1964. The system was run by the Banco Nacional de Habitacao (BNH), like the proposed housing fund, was a secondary institution. BNH began to grow in 1966 after the creation of a social security fund, the Fundo de Garantia do Tempo de Servico (FGTS). Participation in FGTS is voluntary, but because deposits are indexed, most eligible workers entered the system. Deposits grew rapidly, and many of the funds were funnelled to mortgage lending by BNH. BNH did not originate and service mortgage loans, but functioned as a secondary facility. Most loans were indexed, but there was a social window rediscounting low, fixed rate loans to low-income households. Originally it was possible to finance these below market rate loans with the profits on market rate loans.

At first the system seemed to work well. Before the advent of the SFH, very few houses in Brazil were financed through the formal housing finance system (about 100,000 postwar until 1964). During the first decade of operation SFH financed over 1 m units—a dramatic increase, but even so 70-80 per cent of new units were still built without such finance. Unfortunately differences in the indexation of deposits and loans were to cause trouble for the fund. Most loans were tied to changes in wages, not a general price index. In addition, there was a time lag built into the adjustment for mortgage balances.

During the period 1981-84 Brazil suffered a major recession. Wages lagged behind changes in the general price level, and a negative spread developed between borrowing and lending rates. Savings contracted and house prices fell, increasing defaults. After 1984, the economy began a slow recovery—inefficiency remained problematic, and pressure on the housing finance system continued. In February 1986, the government instituted a major monetary reform, popularly known as the Cruzado plan. Among other measures, indexation of wages (and hence mortgages) was reduced, while savings deposits and FGTS deposits remained indexed as before. Despite their indexation, deposits shrank, while the negative spread between borrowing and lending increased. Mortgage lending halted, and both BNH and a number of the primary institutions became insolvent.

Several months after the institution of the Cruzado plan, the system was dismantled. BNH was abolished. Its residual operations were transferred to an arm of the Finance Ministry. Regulatory authority for middle and upper-income lending was transferred to the Central Bank, and placed on a less regulated market footing. Indexation has been made more frequent, and market bond rates—rather than wages—are now the basis for monetary correction. The system is now on a more even keel, although working out losses from past loans remains a problem. Once again the lesson is straightforward: despite an agreement in principle to index the housing finance system, partial indexation can prove insufficient, particularly in an unstable macro-economic environment.

Table 3. Mortgage Indexation in Turkey

In March 1984 the government of Turkey established the Mass Housing Fund (MHF) to stimulate housing supply during a period of recession. Taxes were used to mobilise funds which were lent at low rates. But the government realised that such a system was not sustainable in the long run. MHF expenditures were in the order of one-third of the excess of total expenditure over receipts. Control and targeting of the MHF therefore became a priority. But MHF would continue to play an important role, including that of a financial innovator and implicit insurer against macro-economic risks which no private entity can bear on a large scale.

According to Buckley et al. (1989), the ongoing reforms have three keys. The first is in mortgage design: repayments are to be linked to mortgages, while the outstanding loan balance is linked to the general price level. Secondly, the size of units eligible for subsidised funds is to be reduced. Thirdly, construction period subsidies are to be reduced. Here we will discuss the first in a little more detail.

Indexing mortgage payments to general prices can be a Pyrrhic victory when wages fail to track general prices. While real repayments stay constant, if real wages fall sharply defaults can rise dramatically.

By indexing payments to wages defaults can be minimised, but by indexing the balance to general prices financial institutions (and hence savers) are protected. When real wages rise, too do payments, cutting back the higher balance. If it should happen that real wages do not recover sufficiently over the long term (the 20-year life of the mortgage), the balance is forgiven. The government implicitly guarantees against 20 years of poor macroeconomic performance, but expected losses under worst case scenarios are much lower than with other instruments. Similar designs have been introduced or discussed in Mexico, Ecuador and Chile.
income groups, construction versus long-term financing, first-time owners versus others, upgrading and renovation versus new construction; and the place of housing finance in the development of the financial system as a whole. These and other issues have seldom been considered in such a way as to yield prescriptions for rationalising and developing viable housing finance institutions.

Sources and uses of funds. Developing countries use the full range of sources: household deposits, bond sales, direct and indirect taxation of financial institutions and households, and government transfers. When purchases of bonds or other instruments are mandated by monetary or regulatory authorities the effect is like a tax on financial institutions. The point has already been made that the housing finance system can contribute to financial development, because if properly designed it can mobilise resources, not simply drain funds already mobilised elsewhere.

The record is not what it should be but is improving (Buckley, 1989). The tables illustrate some of the particular problems involved in tying subsidised housing finance to provident funds or other wage funds. Appropriate instruments are another key factor, on both the asset and liability side.

Instruments. On both the asset and the liability side the keys to successful instrument design are appropriate pricing and distribution of risk. In the current macro-environment this always entails indexing on both sides.

On the liability side, indexing savings deposits and bonds enables institutions to mobilise funds domestically, increasing savings. This is a general financial issue, not just a housing finance issue. In some countries opening up the housing finance system to market-oriented liabilities is an important step towards general financial reform.

On the asset side, indexation permits institutions to lend money and stay sol-
vent. Note that on both sides the exact details of the indexation matter. The world is full of insolvent institutions who specialised in partially indexed loans in unstable economic environments. It is also true that indexation is no substitute for stable macroeconomic policy. When inflation is high and variable, and incomes track inflation imperfectly, there is no indexation system which can insulate the system completely.

Buckley and Dokeniya (1989) show how indexation aids financial deepening and, by extension, development. They argue that of the set of major Latin American countries studied, Colombia had the most complete system of indexation and (hence?) the most stable if not most spectacular financial deepening. They estimate an augmented aggregate production function which suggests that indexation might have accounted for up to one-third of Colombian growth.

Public Expenditures

On budget expenditures. An issue which has not received the attention it deserves is the extent to which public housing expenditure simply crowds out private expenditure. For example, Murray (1983) found that for every 100 public housing units built in the USA during the 1970s, private construction was reduced by about 85 units. Further, Mayo et al. (1980a) demonstrated that such public units cost about twice as much to build as they were worth (i.e. twice as much as private units, which on the margin are worth roughly what they cost). New construction programmes which subsidise the construction of new publicly managed units (largely though not entirely for the elderly) are also quite expensive (Malpezzi and Ozanne, 1980). In the USA at least, it seems clear that publicly built housing or subsidised new construction has not given good value for money.

Off budget expenditures. Often the largest and most problematic expenditures never appear on the budget. While currently much discussed in the USA, for example, this is true in other developed as well as developing countries.

In developed countries tax expenditures receive much of the attention. In developing countries there are often large implicit subsidies in the provision of land for shelter projects, although these are somewhat self-limiting, as large implicit subsidies limit their scale. And housing finance subsidies are often ‘off the books’. Table 4 discusses the example of Argentina.

Financing housing by local government. Local authorities finance housing less often than either the UK or other developed countries have done. Public or social housing is more often centrally administered and financed. But local governments face severe problems in financing infrastructure and other services required for housing. As de-
Table 4.

Off Budget housing finance subsidies and inflation, Argentina.

Argentina is a highly urbanised country with one of the highest rates of home-ownership in the developing world. Over the past decade real incomes have fallen, and the country has had the world’s highest sustained rate of price inflation. Despite high real rates of interest extracted from borrowers, capital controls have restricted rates paid to depositors. As a result capital flight has been endemic and the amount of total credit has contracted. Net private investment especially in housing, has fallen. In this environment, almost all housing finance comes from two sources: a housing fund based on wage taxes (FONAVI) and the National Mortgage Bank (BHN).

FONAVI has financed owner-occupied public housing and has apparently been successful in targeting its operation to lower-income households. But typical units cost about $17 000 for households whose incomes average around $750 per annum (roughly a third of the average household income). Given that the overall housing system is not delivering, building upper-middle class housing for a relatively small number of poor people creates its own problems. Units are fully financed by FONAVI, and given that payments are only partially indexed, and that there are long grace periods and poor foreclosure and other recovery practices, only 2-5 per cent of every dollar invested is ever recovered.

BHN is the alternative for middle-income Argentinians. BHN used to mobilise a significant amount of its own resources but, given current deposit policies, is largely dependent on central government transfers and forced deposits from local authorities at negative rates. Together FONAVI and BHN transfer about 2 per cent of GNP into a narrow segment of the housing market.

Buckley (1988) uses a simple consumer surplus model to show how transferring large sums in kind to a few households who do not value the large units anywhere near their costs props up the aggregate investment numbers, but drives up the price of housing without correspondingly large increases in participants’ welfare. The present value of the net cost of these distortions approaches 6 per cent of GNP, and the large expenditures may have accounted for up to a quarter of Argentinian inflation.

Developing countries have faster population growth rates and often lower mobility rates, which implies that filtering from one group to another may be relatively less important in some developing countries (Ferchiou, 1982). Clearly more research is needed on this process.

Figure 16: Housing Investment and GDP

Private Expenditures

Housing investment. This has already been discussed to some extent under ‘Housing supply’ above. The discussion there focused on new construction. In fact, in most countries in any given year 90 per cent or more of housing is provided from the existing stock.

In many countries explicit housing policies focus on new construction. In developed countries it has long been established that most housing for low-income households filters down from upper-income households.
Both infrastructure services and individual housing units can be upgraded over time. In fact, providing appropriate infrastructure can encourage additional private investment in upgrading housing units (Strassman, 1980).

Policies which can aid the efficient provision of housing services from the existing stock include, again, the appropriate provision of infrastructure; regulations, including land use and building codes, which do not unduly impede the upgrading and densification of units; and permitting the financing of the resale of existing units and private upgrading.

House prices. Complaints about housing prices which are 'too high' are almost universal. What is often misunderstood is the fact that high prices are largely determined by standards, codes and financial and regulatory policies. In the section on housing finance above, the relationship between housing price to income and housing finance was discussed. Countries which have poorly developed housing finance systems have high ratios of housing price to household income.

It was also noted that well developed housing finance systems developed because they are market-based systems which pay and charge market rates, or close to them (Figure 18), showing how house price to income ratios are related to interest rate policies. Countries with high levels of general pricing distortion (using Agarwala's composite index, above) have price to income ratios of 5 or more. Those with less pricing distortion clearly have lower ratios. It is ironic that some of these distortions purport to lower prices—overvalued exchange rates are claimed to lower local currency prices of imports, but in fact increase the real cost of imports or import substitutes to those not lucky or well connected enough to obtain rationed foreign exchange. Low regulated interest rates and directed credit policies are said to reduce the cost of credit but again reduce intermediation and raise the cost of credit for those rationed out.

Rental Issues

Roughly 40 per cent of the world's urban dwellers are renters; in many developing country cities, two-thirds or more of the housing stock is rental. While in many countries owner-occupation has increased gradually with development, in the UK the decline of private rental housing was precipitous (Figure 22).

For some time the implicit focus of World Bank-financed sites and services and housing finance projects was to increase opportunities for low-income home ownership. But ex post evaluations showed a
surprising number of units and parts of units rented out (Bamberger et al., 1982). There is a growing awareness of the role rental housing plays in developing countries as well as developed (Lemer, 1986).

First and foremost, rental housing faces the same problems as housing generally. Specific problems include regulations which limit access to finance for rental, for existing stock and conversion.

Rental markets suffer from the same constraints as housing markets generally, but there are also some which affect the rental market particularly (in addition to the obvious problem of rent controls). Among other collateral actions, it will be necessary to:

- Pay particular attention to building codes, land use standards and other regulations which discriminate against low-cost rental housing (e.g. compound housing in many countries). Where appropriate, land use regulations should be modified to permit construction of compounds in urban areas. Building in indigenous materials should be permitted, subject to proper construction techniques.

- Avoid discriminating against the rental market in the provision of serviced land. Thus the requirement of owner occupancy for access to land in any programme designed to improve land availability (including sites and services) should be avoided.

- Avoid the neglect of finance for rental housing. Thus rules for lending should not discriminate (intentionally or unintentionally) against rental housing.

As in Britain, in some developing countries investment in rental housing has pejorative connotations of ‘landlordism’. To outsiders it is puzzling that in some economies investment in, say, video cassette recorder factories is considered socially beneficial and ‘productive’ while investment in housing is not.

Also the traditional mistrust of large scale business one finds in the USA and elsewhere is stood on its head: since Rachman, small-scale landlords have been vilified, and large-scale landlords considered ‘safe’. But in the USA such evidence as does exist suggests that small-scale landlords are at least as responsible as large scale landlords, and that if anything resident landlords maintain their property better (Porrell, 1982).

In any event rental housing has sharply declined in the UK (Figure 22, from data in Minford et al., 1987). No doubt at least three causes of the decline can be identified: home-ownership has increased with income and the availability of finance (as well as the decline in alternatives), the social rental sector has increased as a matter of public policy; and controls on rent and security of tenure have limited the viability of private rental.
Table 5.
Rent controls in Kumasi, Ghana

The last 25 years have seen Ghana decline from one of the richest countries in Sub-Saharan Africa to one in which the infrastructure and capital stock, including housing, are in very poor condition. During the period 1965-86, real per capita GNP declined at an average annual rate of 1.7 per cent per year.

Forty years of rent control have been successful in keeping rents in Kumasi very low: on average, rents are less than 2 per cent of total consumption. There can be few households in Kumasi who cannot afford the monthly rent of a room. But housing conditions in Kumasi are bad, even given low incomes. Controls are not the only reason, but they contribute. And recently more and more households have been paying large advances, causing particular problems given the difficulty in financing large lump-sum payments for most Ghanaians. Using a model which permits the comparison of controlled units at controlled prices ($P_cQ_c$), controlled units at estimated market prices ($P_mQ_m$), and estimated market demand at market prices ($P_mQ_m$), Malpezzi et al. (1989) found the following:

—Renters pay a fraction of the estimated market rents for their units—roughly half, on average.
—Households would spend even more than the estimated market price of housing in the absence of controls—about three to four times their 1986 expenditures. That is, consumption of housing services has been greatly reduced under controls.
—The ratio of benefits to costs is low. Under the most 'favourable' assumption in terms of controls' efficiency, tenants receive net benefits which are less than half the static cost to landlords. If the price elasticity is of the order of —0.5, net benefits to most tenants are negative: both landlords and (most) tenants are made worse off by controls.
—Landlords differ little from renters except in the amount of housing they are able to consume. Their median incomes are about one-third higher, but there is significant overlap: about one-quarter of landlords have incomes below the tenant median; about one-quarter of tenants have incomes above the landlord median.

The bottom line, then, is that rent control reduces the rents households pay, but the benefit of this rent reduction is more or less offset by the welfare loss from under-consumption of housing.

Rent control is not the only problem in Kumasi's rental or housing market generally. Other problems—in land, infrastructure, finance and materials—adversely affect the market, and drive costs up. They drive costs up higher for the poor than for others. Relaxation of rent control is necessary but not sufficient for expanding the supply of rental housing. Relaxation/decontrol must be accompanied by measures to ensure a rapid supply response to the demand for rental housing, or else rapidly rising rents could squeeze existing tenants and jeopardise decontrol. Political consensus is, after all, required for successful change. Alternatives for decontrol exist. Malpezzi et al. discuss a number of alternatives, including decontrolling new construction, indexing rents for existing units to general prices and letting real rents for existing units rise gradually.

Whatever option is chosen, action must be taken to ensure elasticity of the housing supply so that increases in rents are accompanied by an increase in production. This requires that rent control is seen as one part of a housing strategy which reduces supply side constraints, including land, infrastructure, materials and finance; so that changes in controls result in increased housing consumption rather than greatly increased prices.

Rent controls. A majority of countries have some form of price control on some or all of their rental housing stock. In many countries rent control is one of the most visible and contentious housing policy issues.

Unlike many housing programmes, rent control has very small on budget costs. This makes it initially attractive to policy makers faced with budget constraints. The off-budget costs are usually unknown, and are perceived to be borne by a small and well-off group. Research has shown that in fact these costs can be large and difficult to control, and that the incidence of the costs can be quite arbitrary and regressive. Controls can also have important negative collateral effects on, for example, property tax revenues, labour mobility and employment.

Rent control is usually thought of as a policy applied to private markets, but publicly provided housing is also subject to controls, and to some of the attendant problems like reduced revenue and maintenance. For example, most urban housing in China is owned by the state or state enterprises. Rents are typically 5 yuan per month or less (less than $2). As a consequence, housing subsidies are about 25 per cent of the state budget. Many units are under-maintained because of lack of financing.10 Severely controlled prices can cause problems for public as well as private housing.

Rent control can be analysed as an implicit tax on housing capital. In the simplest case, where imposition of controls reduces the price of an existing stock of rental housing, the tax is borne by landlords for the benefit of tenants. Over time as the market adjusts to controls, the incidence of the 'tax' becomes more complicated.

There are many different kinds of rent control regimes. For example, one key feature is whether controlled rents are adjusted for changes in costs (with cost pass-through provision or adjustments for inflation); how close the adjustment is to changes in market conditions; how it is applied to different classes of units; or whether rents are effec-
URBAN HOUSING

Figure 21: House Price to Income and General Distortions

![Graph showing house price to income and general distortions.]

Relatively frozen over time, other key provisions which vary from place to place include the breadth of coverage, how initial rent levels are set, the treatment of new construction, whether rents are reset for new tenants, and tenure security provisions. Rent control effects can vary markedly depending on these specifics, and on market conditions, as well as enforcement practices.39

Although it is commonly accepted that rent control can reduce the efficiency of the rental market, the magnitude of such effects is debated, and proponents of controls usually justify them as a redistributive policy. The three key questions are these. What are the efficiency losses from controls? (What are the off-budget costs?) Do they redistribute income as intended? (Analyze the incidence of the tax?) Are the benefits to some tenants worth the costs?

Studies which calculate the static costs borne by owners of existing rental units show that the reductions from market rent can be substantial, but that tenants, in general, value the implicit subsidy of controls less than it costs. In Cairo, Egypt, monthly rents for a typical unit are less than 40 per cent of estimated market rents. Key money and other side payments make up about a third of the difference (but mostly for newer units). Benefits to tenants are further reduced because they are not free to choose a unit of appropriate size and location (Maipezz, 1986). In Bangalore, India, controls reduced median rents by about 30 per cent, according to a 1974 survey; this rent reduction has certainly increased, since overall prices have more than doubled since 1974, while rents have lagged behind. Further, statistical evidence suggests that much of the benefit of reduced rents is eroded by reduced housing consumption (Maipezz and Tewari, 1987). In Amman, Jordan, the static cost of controls is about 30 per cent of estimated market rent; the benefit to the typical tenant is only 65 per cent of cost (Struyk, 1988).

These aggregate statistics mask large variations in costs and benefits to individual tenants. Often long-term tenants of older buildings receive lower rents at the landlord's expense, while recent movers pay large amounts of illegal key money, if they can find a unit at all. Rent control is a very inefficient transfer mechanism.

Rent control can also impose dynamic costs. Controls can reduce dwelling maintenance, reduce the useful life of dwellings and inhibit new construction. Controls provide strong incentives to convert rental units to other uses. These market responses shift the incidence of rent control costs forward to tenants, over time. It is theoretically possible to design a rent control regime which...
does not discourage maintenance and starts with a pricing scheme which rewards maintenance and new construction (Olsen, 1988). In practice, revaluation and maintenance inspections are expensive and difficult to organise; and new construction can still be adversely affected by the expectation of future controls. These dynamic affects also vary by type of regime. In Cairo, key money payments and the lack of alternative investment opportunities for remittances from abroad have combined to keep new construction afloat, while reducing maintenance. Scarce housing capital is wasted by rapid building, holding units vacant in anticipation of large key money, and allowing them to deteriorate rapidly once occupied. In Kumasi, Ghana, on the other hand, controls have contributed to a nearly complete shutdown in the housing market. In a market where the population is rapidly expanding, rents for rooms in compound houses are held to 300 cedis per room, about one-quarter the price of a bag of cement. In a recent sample of 279 houses, only three structures were built in the last 5 years.

Some tenants are, on balance, worse off under controls because of constraints on housing consumption. And in markets with significant uncontrolled sectors, rent controls can drive up the price of uncontrolled housing, an important unintended consequence further complicating the incidence of its costs.

In addition, the benefits are very poorly, and in some cases perversely, targeted. Analysis of individual costs and benefits in the markets mentioned above shows no consistent redistributive effect. Typical landlords are better off than typical tenants, but the differences are not great; there are many well-off tenants benefiting from controls and many landlords with modest incomes. In Bangalore, about 10 per cent of tenants are also landlords; and as a class, they are as well-off as home owning landlords. In general, even when the cost of controls has not yet largely shifted to tenants, it is not clear why it is desirable to tax such a narrow base as landlords. Even in a market with a high rate of rental accommodation, rental housing is typically less than 40 per cent of fixed capital formation. This is a large percentage, but the effect of controls will inevitably be to distort investment decisions towards uncontrolled capital, often including luxury accommodation.

While enforced rent control effects are never negligible, in many markets efficiency losses from other market imperfections are at least as great. Land markets, financial markets and infrastructure are examples of input markets which may not function well, and which inhibit the supply of rental (and other) housing. Successful decontrol requires attention to these supply side constraints. Alternative methods of decontrol exist, and vary in their effects (Arnott, 1981; Rydell et al., 1981). The simpler method, blanket lifting of controls, works best when the housing market is responsive (i.e. when housing production and housing input markets are free from major distortions). When market conditions are not favourable, gradual methods of decontrol can be cou-

| Table 6. |
| Land regulation, Malaysia. |

Land development standards constitute one of the major constraints encountered by developers in responding to the demand for low-cost housing. Analysis of developing country land use standards using the Bertaud model shows that some standards and practices verge on the extravagant.

In Malaysia, for example, the area per household provided for roads is up to four times larger than the area for roads in projects in other countries of Asia, Europe and America for a similar range of plot sizes. Using international practice as a yardstick, it appears that about 26 per cent of the land developed for residential purposes is wasted. This waste is due in large part to excessive road areas, arbitrary setback regulations and, in lesser part, to redundant community facilities.

Regulations which impose such costs reduce the supply of land and lead, consequently, to an escalation of land prices. Lower resulting densities increase the cost per dwelling of providing and maintaining infrastructure. Indirectly, lower densities result in higher transport costs and a reduction in overall urban efficiency. Adjustments in both land use standards and engineering practices could reduce costs significantly and increase the supply of low-income housing with little reduction in the benefits to users. In Malaysia, present land use practices imply that about 170 m² of raw land is required to develop a minimum plot of 68 m². At least one-third less, or about 110 m², would be sufficient if land use standards were in line with those used outside Malaysia. In other words, the land use standards are precluding densities above 60 plots per hectare (densities of existing schemes are in general even lower, as many plots are above the minimum size) where densities of about 90 plots per hectare are common for areas within the range of the minimum plot sizes used in Malaysia.

Any revision of land use standards should not aim at reducing costs by indiscriminately changing all standards. The revisions should be designed to increase the supply of low-cost units by responding, as closely as possible, to market preferences and by removing the cost distortions created by some of the legal minimum standards. The removal of those distortions would have the effect of stimulating developers to produce more low-income plots where the demand is the greatest and not necessarily where land is the cheapest.
plied with direct attacks on collateral housing market problems, e.g. reform of the housing finance system. Examples of specific methods include indexing rents at or above the rate of inflation for a specified time before lifting controls; decontrolling specific segments of the market first; and revaluing for new tenants. A successful decontrol strategy must minimise the costs of adjustment to ensure political feasibility and sustainability; must be transparent and credible to potential investors; and must attack collateral problems in housing markets which could impede the supply response.

Decontrol options. There are a number of options which could be considered for removing or relaxing controls. Amott (1981) has provided a taxonomy of the main options.

Blanket lifting: all rent controls are completely removed as of a certain date. This is the simplest method, but is very difficult politically, and may lead to short-run dislocations.

Decontrol new construction: an obvious option which is being undertaken in India, Brazil and a number of other markets. But new construction can still be inhibited unless government credibly guarantees that units will not come under controls later.

Rents could also be immediately decontrolled for units which meet certain standards, either now or after upgrading (e.g. for units which provide acceptable water supply and sanitation). Standards would have to be carefully chosen, however, to meet requirements without imposing unnecessary costs.

Floating up and out: controls are gradually relaxed—rent rises are some multiple of consumer price or wage index changes, for example—until controls are no longer binding on most units. Then controls can be abolished. This method can permit a smoother adjustment if potential landlords view the gradual programme as credible.

Vacancy decontrol: units are decontrolled as they become vacant. This method has been tried in some North American markets, but may keep mobility down, with possible adverse effects on housing and labour markets.

Vacancy rate decontrol: particular markets are decontrolled as the vacancy rate rises above some threshold. But while controls (and other problems) remain, vacancy rates will probably remain extremely low. How can vacancy rates increase while controls remain?

Rent level decontrol: decontrol by market segment. Rents could be decontrolled from the top down (the current system, with a threshold of 1000 cedis, embodies this to a limited extent). But such a system can provide perverse incentives to raise rents above long-run equilibrium levels in order to escape controls.

Contracting out: landlord and tenant negotiate a payment to the tenant in return for the latter’s giving up the right to controls.

Of course these options are not all mutually exclusive. In many respects floating up and out often has some a priori appeal, because the market may take time to respond, particularly if other problems in input markets, etc. are severe. Blanket lifting carries the danger of a sharp short-run rise in rents which would be reduced over time. Present value models provide a simple way to study these alternatives (Malpezzi et al., 1989); more complicated models of market-wide effects can also be constructed (Amott, 1981; Rydell et al., 1981).

OTHER KEY ISSUES IN DEVELOPING COUNTRY MARKETS

Land Markets

Tenure security. An estimated 20-40 per cent of all urban households in developing

Table 7.

Infrastructure and productivity, Nigeria

Rapid urbanisation in Africa has strained the public sector’s ability to provide essential infrastructure services. Research by Lee and Anas (1988) has documented the extent of the problem in Nigeria, and suggested some policy responses.

For example, a survey of 179 firms showed that while all were connected to the power grid, every one with more than 20 employees had its own standby generators and invested, on average, $130,000 in generators. On the other hand, only a third of small firms can generate their own power. Similar patterns are observed in water supply, communications and transport. Unnecessary duplication and losses of economy of scale are significant.

Overall the capital value of private infrastructure is about 25 per cent of the total value of machinery and equipment for small firms, and 10 per cent for large firms. The situation is particularly problematic for small firms, which are least able to gain any economies of scale when providing their own infrastructure. And regulations make it more difficult for private firms to sell infrastructure services to each other.

Pricing policies which enable public providers to recover their cost and maintain and expand infrastructure services, changes in the regulatory environment for both public and private providers and, in some cases, privatisation are among the policy responses discussed by Lee and Anas.

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countries are living on land to which neither they nor their landlords have legal title. In many cities the figure is much higher. Squatter settlements are the most conspicuous sign of how land markets work in developing countries, but they do not define what is wrong with those markets.

The market for land in developing countries is often highly unorganised. Information about who owns what is poor; squatter settlements increase uncertainty about property rights; the legal and administrative systems for establishing, recording and transferring titles are inadequate. These failures have serious ramifications, many of which affect the poor disproportionately. Property transactions are slow or stalled; incentives for new construction and upgrading are depressed; lenders are unwilling to extend credit to property holders without clear title; and property taxation is impeded, often with the result that infrastructure investments can neither be made nor maintained because costs are not recovered.

When cities in developing countries began to grow rapidly—and with them their slums, bustees and bidonvilles—land policy often had a simplicity that was generally misguided: if squatter settlements are growing, evict the squatters. Such policies have rarely been effective. Usually they displaced rather than eradicated settlements, they were politically and economically costly, and, more fundamentally, they failed to deal with the root causes of squatting—low squatting incomes and insecure tenure.

Given the ineffectual and costly nature of squatter removal, governments have increasingly taken a more direct approach to dealing with squatter settlements and to improving the efficiency of urban land markets. They have tried to upgrade rather than remove squatter settlements and slums. Upgrading schemes have generally involved the physical improvement of slum areas and increasing the security of tenure by mapping, by cadastral registration and by government’s selling land to squatters (often at subsidised prices). The impact of such efforts has often been dramatic, prompting large additional spending by the residents.

**Land regulation.** More and more the role of land regulation in driving up costs and reducing supply is discussed in developed and developing countries alike. The costs and benefits of land use regulations can be estimated using the Bertaud model (Bertaud et al., 1988). The cost of development under current regulations can be compared with the cost of development under some regulatory baseline, adjusted for any benefits which may accrue from the additional regulation. While the choice of the appropriate regulatory baseline is more art than science, in many developing country cases even fairly high baseline standards (say low-cost European standards) yield large estimates of regulatory cost.

Often one of the largest regulatory costs to developers is the delay imposed by regulatory procedures which tie up capital and increase risk. In the USA, for example, developers often take a year or more to receive planning permission. Given estimates of the average delay (compared to some reasonable baseline), the amount of capital tied up and its opportunity cost, estimating this cost is straightforward. Among other significant determinants of land prices, infrastructure is the most important.

**Infrastructure.**

The provision of infrastructure and related services—transport, water, and sanitation for example—is a traditional public sector activity, and one of particular importance to low-income groups. Directly, households benefit from several types of infrastructure through saving time and money (for example, publicly supplied water rates versus user charges) and through improved living conditions. Often infrastructure investments encourage new construction and the upgrading of existing housing, including the provision of more houses to rent. Households also benefit indirectly from infrastructure investments, if these are seen as legitimising previously illegal or informal settlements (discussed in the previous section).

Government policies on the supply and pricing of urban infrastructure are characterised by various conflicting tendencies. For example, governments have taken the view that (a) water and sanitation (and sometimes other types of infrastructure) are merit goods; (b) infrastructure has significant externalities; (c) low-income households may, out of ignorance, seriously underestimate the benefits of improved water and sanitation; and (d) some of these services involve large economies of scale—that is, they are natural monopolies or, at least, require investments too large for the private sector. These views have led to governments’ taking the leading role in providing urban infrastructure, but often with under-investment, and prices that are too low to recover costs. The result has been severe rationing and chronic problems in maintaining and expanding the stock of urban infrastructure. Cities are therefore both less efficient and more inequitable than they could be with alternative policies.

Of the possible alternative policies, cost recovery is a high priority. In some cases, better information about people’s willingness to pay for improved water and sanitation could help. Poor households are widely assumed to be unable or unwilling to pay for improved services; often this is not so. For example, many urban households spend significant amounts of time collecting water from standpipes or wells; in cities with water vendors, people often pay high unit prices for water. Understanding the demand for water, sanitation and other urban services also helps to indicate the correct type of technology. For example, the choice between a communal standpipe system and individual house connections depends on the demand for water and the value people place on the time spent in water...
The Regulatory Framework

Changes in regulation are often among the most pressing areas for reform. Regulatory reform can play a key role in the three areas just discussed, i.e. increasing the supply of finance, infrastructure and developable land. Zoning, taxes, rent controls and building standards are other obvious regulatory areas to study for possible change. Governments must carefully weigh the costs and benefits, and the distributional consequences, of regulation. Regulation should strive for a ‘level playing field’ in so far as it is practical. Land regulation has already been discussed briefly; this is now discussed more broadly.

Subsidies, taxes, regulation and other interventions: a simple model. Governments intervene in housing markets through subsidies, regulations and taxes which are used to achieve a variety of purposes. Each policy intervention can be analysed in turn by examining how the interventions change the prices and corresponding present values. Present values have the advantage of enabling direct comparisons of the costs and benefits of quite different interventions in different programmes. Some interventions impose costs (e.g. land use regulations, taxes, rent controls and building regulations) and some benefits (e.g. land subsidies, tax relief and financial subsidies). Some interventions confer corresponding costs and benefits on different market participants; for example, rent controls benefit some tenants at the expense of landlords (and perhaps some other tenants). Other interventions offer costs and/or benefits on some participants without an obvious corresponding gain or loss elsewhere. For example, some very high infrastructure standards can confer large costs on developers without producing much in the way of benefit for anybody.

While there is nothing technically difficult about doing so, the effects of all the numerous taxes, regulations and subsidies are hardly ever added up. In the USA, the ‘user cost’ literature takes this approach, usually focusing on the interaction between taxes, inflation and finance. In a number of developing countries, we are beginning to adopt a variant of the same approach.

In this framework, there are three entities from whose point of view housing policies and programmes are evaluated: the economy, housing suppliers (or developers) and households. The exact incidence of the various costs and benefits of government interventions can be a subtle issue. For example, although the incidence of the property tax appears straightforward—property-owners pay the property tax—some portion of the tax could be shifted to tenants (for rental property) or to the owners of capital generally (if capital markets were well integrated). Incidence can depend on the competitiveness of the market, the state of transactions costs and knowledge in the market, the efficiency of financial markets in a country, and the time frame—in other words, it is rarely settled and unambiguous. In this model a simple approach is adopted, where the entire cost or benefit is assigned to one participant (as will be described for each specific intervention below). If our knowledge of actual incidence improves it would not be difficult to build in a more sophisticated treatment of incidence.

The same present value method used for the evaluation of the public housing programmes serves as an organising framework for the analysis of the private housing market. The model permits comparisons of...
the profitability of various types of housing (high- versus low-cost, owner occupied versus rental, one location versus another). Present value analysis provides a convenient summary of the economic returns to housing investment of various types, and also permits the analysis of how government actions such as land use regulation, financing policy, infrastructure provision, taxation, price controls and other regulations affect incentives to investors.

Exemption from a regulation which has an identifiable benefit to society similar to its cost is treated as a subsidy. It is reductions in regulations which do not yield corresponding benefits which are pure cost reductions. In other words there is a baseline of normal desirable regulation from which extra regulatory costs are measured.

Example: Malaysia's housing market. The case of Malaysia illustrates the importance of adding up incentives and studying their incidence. Malaysia's Special Low Cost Housing Programme (SLCHP) was designed to induce private developers to build low-cost housing. Analysis by World Bank staff demonstrated that, despite strong demand, on balance government regulations have still cost the developer money, raised costs and reduced supply. Many of these regulations yielded little or no benefit to consumers or anyone else.

Again, the costs and benefits of different interventions accrue to different participants in the market (developers, homeowners, landlords and tenants), and one individual's subsidy will not necessarily cancel another's cost. A simple model starts with the standard economic cost benefit of a representative investment, then adds the major interventions, with simple assumptions about incidence (Figure 23).

The relationship between these calculations and market behaviour is now clear. If the economic cost-benefit is positive, the unit is efficient. If the developer's cost benefit is positive, a supply response will be observed. If the purchaser's cost-benefit is positive, there will be demand for the units.

The analysis can be carried out for different kinds of units, different tenure arrangements, public versus private producers, units in different locations and so on. In each case there are several logical possibilities from the above. An example of a desirable outcome would be the case where a unit is efficient, will be supplied and for which there is demand. An example of an undesirable outcome is the case where a unit is efficient, there is demand, but regulatory costs make it unprofitable to produce such units.

All costs and benefits are expressed as present values to facilitate comparisons. One assumption of this particular model is that there is no large market-wide distortion driving a wedge between market value and true economic benefits; but such differences could be estimated in markets where the assumption is not tenable.

To estimate financial subsidies, calculate the present value of the subsised cash flow at unsubsidised rates. In addition to end user mortgages, construction period bridge and other intermediate financing should not be neglected. Some countries with poorly developed financial markets, or particularly inappropriate terms (e.g. 30-year fixed rate instruments), a baseline unsubsidised rate may not exist; in these cases a range of estimated market rates can be tested. And in countries with directed credit systems it could be the case that the cost of credit to housing exceeds the marginal cost of capital, especially if adjusted for transactions costs. If fully fledged studies of the housing finance system and instruments have been carried out, the results can readily be integrated into this framework.

Once they are identified, the costs and benefits of other interventions can be readily estimated; various taxes, for example, are usually straightforward. While the above short list is a guide, some markets will have 'innovative' regulations, e.g. some countries restrict programme participation to particular kinds of households. Malpezzi (1988) provides more details and examples. Rental models can be built, incorporating rent controls and regulations about tenure security when they exist. Public and privately produced units can be compared. Affordability assumptions can be readily added to such a model.

Many of the inputs to such a model can vary over some range, especially when more than one 'representative investment' is considered. But experience shows that adding up the best estimates of as many significant interventions with simple assumptions about incidence yields valuable insights about market behaviour. Despite the conservative procedure, the costs of some regulations greatly exceed their benefits, as will be shown.

Costs and benefits. Each category of regulation will be discussed briefly, in turn.

1 Controls on prices and rents. In general, rent controls in Malaysia are limited to pre-World War II units which now comprise less than 10 per cent of the stock; we have not analysed controls for such units as yet; in any event, the unit we are studying as an example is an owner occupied unit.

2 Land use regulations and standards. In this version of the model we rely on estimates provided by Bertaud's work. In Malaysia, land use and infrastructure standards are particularly high. Part of the SLCHP is a new set of lower standards for low-cost housing. However, actual approval of plans utilising the new standards is left to local authorities, which have so far continued to rely on previous, higher standards. In a separate exercise costs were estimated using the detailed analysis of standards and their effect on land use. Costs per plot of development and servicing land under current standards for a private development in Selangor were estimated at $8600. The Bertaud model analysis demonstrated that the major regulatory cost in this area is related to the reduction in saleable land from numerous requirements for road widths, setbacks and large set-asides for public areas. From that analysis it was
shown that the difference in cost between the current standard (as little as 25 per cent saleable land) and the recommended standard (65 per cent) is M$6000 per plot. This difference is the estimate of the cost of land use and infrastructure regulation. It is conservative: this is the minimum amount that would be saved by changing these standards.

(3) Building codes and standards. Detailed analysis of the costs of these regulations was not feasible given our limited resources; based on interviews with developers and government officials, it appeared that the costs of these regulations was small relative to other regulations (particularly land use standards). But they could, in principle, be added straightforwardly.

(4) Costs of permits and permissions. The costs should reflect the cost of additional delays (capital tied up, etc.) as well as monetary charges for the permits. In preliminary work we used a notional amount of M$1000 as the cost of such permits and permissions; since permissions can take up to 5 years, this is a conservative first-order estimate.

(5) Regulations encouraging sales to Bumiputras. Typically, 30 per cent or more of the units in a development are set aside for Bumiputras (ethnic Malays and indigenous peoples). This adds to the developer's cost in two ways. Firstly, Bumiputras will typically receive a further discount on the sales price, and secondly, in many cases it will take longer to market the units because of the restriction. These costs can be estimated, given the sales price, the proportion of units under quota, the increase in average holding period of units due to the quotas, and the discount rate. Under conservative assumptions these costs are 6-7 per cent of the average sales price of the unit.

(5) Financing. Financing is analysed on the basis of fixed rate self-amortising mortgages. Many mortgage instruments are legally adjustable rates but in practice adjustments are very sticky. The key to analysing housing finance in government programmes is a good estimate of the market rate of interest for a similar loan. In many countries we would have to rely on informed guesses, because of the lack of similar market instruments. Fortunately, Malaysia has a well developed financial system, and reasonable comparators exist. For this example we have assumed a 25-year loan, a market rate of 12 per cent (a conservative assumption—the market rate for such a loan could
be as high as 14 per cent), a nominal lending rate of 10 per cent, and a loan to value ratio of 0.95. To calculate the present value of the financial subsidy, deflate the nominal principal and interest payment in real terms, then take the present value of the initial loan followed by the real repayment stream, discounted by the market price of interest (i.e. the nominal market rate of 12 per cent less the assumed inflation rate of 10 per cent).\(^5\)

7) **Taxation.** Taxes comprise registration taxes, acquisition taxes, capital gains taxes and property taxes. Landlords pay taxes on rental income net of recurrent costs at a rate of 30 per cent. Capital gains taxes are levied on nominal, not real, appreciation. In this version we have assumed a capital gains tax rate of 5 per cent. As noted elsewhere, Malaysia has a sliding scale of capital gains taxes, which are quite light if units are held for 5 years or more.

**Incidence.** Costs and benefits to each market participant are collected as financial costs and benefits to developers, and landlords and tenants, respectively. Assumptions about incidence are straightforward and intuitive.\(^6\)

The assignment of an item to the cost or benefit side is, in some sense, arbitrary; generally, a cost is just a negative benefit, or vice versa. But what matters is their sum, the net cost-benefit; and this is invariant with respect to which side of the ledger the amount is assigned, as long as the correct sign is used. If their net benefit less cost is greater than zero, developers will build the unit and similarly, if the analogous sums are positive for landlords, they will purchase and operate such units; while if their net benefit is greater than zero, tenants will demand such units.

Figure 24 illustrates the incentives and ‘disincentives’ faced by developers of a representative SLCHP unit. The developer receives substantial subsidies through low cost land and reduced infrastructure standards, but these are more than outweighed by the costs of regulations and the pricing restriction that effectively requires the unit to be sold below cost. The net effect of these interventions is to add about M$4000 to the developer’s cost (the bottom bar), leading to a net loss on each unit of about M$2000.

Figure 25 tallies the incentives and disincentives to purchasers of a representative SLCHP unit. The estimated subsidy to the purchaser of nearly M$9000 is mostly due to below market pricing restrictions and mortgage financing.

Figure 26 shows how these add up from the point of view of the economy, the developer and the purchaser. This particular unit is efficient, i.e. the benefits to the economy outweigh its costs. Demand would be strong in the absence of additional purchaser incentives, but will be very high given the additional subsidies involved. But because of regulation developers lose money, so they would build these (efficient) units only if forced to do so (e.g. to obtain planning permission for other units) or if purchasers paid higher than official prices.

Analysis of units outside the programme was equally instructive in demonstrating how regulations hampered developers and ultimately consumers. Details are available in Hannah *et al.* (1989).

**Regulation and the environment.** Much of the discussion on regulation so far is in the context of over-regulation. Why is there a systematic tendency to over-regulate? Why do regulations so often offend both efficiency and equity? The tendency to over-regulate can be explained by (1), the failure to consider costs and benefits, from which follows (2), the fact that every interested party adds its own small regulations and that the regulations are never considered together (the adding up problem), (3) some over-regulation results from a breakdown in exchange between regulators and the regulated (the Coase theorem can be applied here), and (4) regulations are an opportunity for rent seeking behaviour/vested interest. Given such over-regulation, understanding reduced efficiency is easy: regulations impose larger transactions costs.
than benefits. Inequities also follow: the poor are not usually particularly good at rent seeking behaviour, and since regulations raise costs and restrict supply, it is the poor that are rationed out first. Regulations on lot size, for example, are not directly binding on the rich.

Other areas are clearly under-regulated. The environment is one area in which a consensus is building that more needs to be done. What is argued here is that the path is clear for all regulation. Do the cost benefits of specific regulations: eliminate or modify regulations whose benefits exceed costs; keep or enact or enforce the ones which make the grade? Get the regulations right. The superficial inconsistency of arguing for tighter environmental regulations disappears in this framework; even more importantly, we have a tool to discriminate between important and frivolous environmental issues, and policies.

Housing Policy and the Macroeconomy

The macroeconomic effects of shelter policies are often misunderstood by housing specialists and macro-economists alike. Important areas for current and future research include: the relationship between housing investment and development; housing investment and the business cycle (including employment); housing policy and structural adjustment; and alternative views of housing as a productive investment.

Different shelter policies have very different macroeconomic effects. Policies which meet macroeconomic efficiency criteria are also consistent with sound macroeconomic policy. The policies which were found wanting in the discussion above, including heavy consumer or producer subsidies and direct government production of housing services, are also the policies which are inconsistent with sound macroeconomic management. Good policies improve the supply of key inputs, and ensure their efficient use; in macroeconomic jargon, they move the economy towards the production possibilities frontier.

The productivity of optimal housing investment. Many people working in the shelter sector are not used to thinking of its investments as productive. Many planners and some macro-economists suffer from the same misconception. But shelter and infrastructure investments are productive: they are investment in an asset which yields a flow of services over time. To label such investment as 'consumption', as is quite common, is incorrect. The same criteria which govern the choice of other investments should govern this one. Arguments about externalities, indirect contributions to labour productivity and employment multipliers obscure this central point.

Is housing a social sector? The term 'social' is rarely defined in policy discussions. One useful definition is the following: a social sector is one which produces a good for which the marginal benefit to society exceeds the competitive price. It is often argued that housing is such a good, although it is very difficult to quantify the size of the 'externalities' produced by improved housing. However, we have noted that in many developing countries the housing market functions poorly because of problems in factor markets and a poor regulatory framework. Even without considering externalities housing investment is insufficient. The required response is not necessarily more public sector expenditure to build houses, but public action (including, but not limited to, some expenditure) to improve the functioning of land and finance markets, to provide infrastructure and to provide a proper regulatory framework.

Does the fact that housing can be considered a social sector mean it is nonproductive? The answer must be that this is a simple non sequitur. Housing investment produces a flow of housing services. Housing services can, in turn, be considered an intermediate input into the production of other goods and services. Consider what happens to national product when housing capital is destroyed; for example, by natural disaster.

What is required is not special treatment but a 'level playing field'. Housing specialists should avoid special pleading, but insist that shelter investment be considered on its true economic merits. Macro-economists and planners must do the same. As will be demonstrated below, policies which are efficient from the microeconomic point of view are also sound macro-economics. Policies which fail this test also exact macroeconomic costs. Conversely, sound macroeconomic policies are a precondition for the health of the sector.

Housing policy and structural adjustment. This is a particularly contentious and misunderstood area. Macro-economists tend to argue that structural adjustment and housing are inconsistent. Housing specialists tend to respond with special pleading for the sector rather than addressing the real issue.

Typically, in an externally designed structural adjustment, international agencies focus more on overall targets for reducing absorption (including government expenditure) and less on how it is to be reduced. Governments can choose to cut elsewhere. However housing often will bear a large portion of the cost of structural adjustment.

The key to structural adjustment is expansion of the traded goods sector (that is, goods which are exported and goods which substitute for imports). This requires, among other things, that relative prices for such goods, and for foreign exchange, reflect their real resource cost. Housing is a non-traded good, and a short-run static model of structural adjustment with fixed endowments and full and efficient employment of all resources implies that expansion of the traded goods sector must entail contraction in the non-traded goods sector. This model does not tell the whole story, for five reasons. Firstly, if resources are not fully and efficiently employed (i.e. the economy is not at the 'production possibilities frontier') there may be scope to
expand the traded goods sector without contracting the non-traded sector. Secondly, in the medium and long run the economy’s factor endowments are not fixed, and even depend on the ability to invest in the optimal mix of assets, including housing. Thirdly, it is assumed that factors of production are relatively fungible between traded and non-traded sectors during the period of adjustment. Fourthly, if inappropriate pricing (especially of foreign exchange) depresses the traded goods sector, this should be addressed directly (exchange rate reform) rather than by imposing additional distortions on the non-traded sector. Fifth, and perhaps most importantly, housing and its associated infrastructures are sine qua non for the production of any other goods, tradable or not. They can properly be viewed as intermediate inputs to the production of tradables (and non-tradeables).

Shelter policies which are ‘bad’ at the micro-level (according to the criteria outlined earlier, around the discussion of Figure 1.) are also bad macro-policies. Heavy subsidies increase absorption. ‘Good’ policies move the economy towards the production possibilities frontier. The key point is that different shelter programmes and policies have different macro-effects. Some programmes are consistent with structural adjustment (those which improve financial intermediation, for example), while others are not (simple housing allowances). In general, projects which improve the efficiency of input markets (Box 1 of Figure 1) are consistent with structural adjustment. In fact, they may be required for successful adjustment.

**TOPICS OF SPECIAL INTEREST TO THE UK**

In this section I shall address issues which seem particularly relevant to the UK today. Meullbauer (1988) presents one convenient summary of issues. Here I shall discuss in more detail taxation and housing, and privatisation.

**Taxation and Housing**

Perhaps the key issue in taxation and housing is that of tax expenditures. Discussed above, their sizes and effects are still under-appreciated by all but a few specialists.

Tax incentives can be potent incentives but can lead to large revenue losses. Caps on deductions (such as those currently in place in the UK) may mitigate some of the worst effects. Tax credits may be preferable to deductions on equity grounds alternatively, deductions may be limited to the basic (lowest) tax rate in a progressive tax system. How should housing be taxed? How should any productive asset be taxed? A view commonly held by economists is that if income is adopted as the basis of taxation, real income from whatever source derived should be subject to tax, but that income should be measured net of the costs of producing it. Both recurrent income (from wages and capital) and capital gains would be subject to tax, but only real capital gains would be taxed.

For rental housing, this suggests that rental income should be taxed as ordinary income, as well as real capital gains. Offsetting deduction would be permitted to landlords for the costs of doing business, including maintenance and repair, interest payments, property taxes and net economic depreciation of the unit. Extra taxes including implicit taxes such as rent control, are to be avoided.

These same principles suggest that, in the case of owner-occupied housing, current costs (including interest payments, maintenance and repairs, net depreciation and property taxes and rates) would be deducted from taxable income. Imputed rent would be taxed—that is, the rent that the unit would command in the market — and the real portion of capital gains would be taxed. Taxation of rental units would be similar.

Taxation of owner-occupiers’ imputed rental income is not very popular, and virtually all countries allow most households to defer if not escape capital gains taxation. A second set of principles is, if imputed rents and capital gains are not taxed, not to permit the deductions of costs. Consider a country like the USA, where tax administration is fairly effective, and where (since 1986) the taxation of rental housing has been roughly in line with the principles enunciated above. US owner-occupants do not pay tax on imputed income, and generally do not pay taxes on capital gains. Unlike owners of rental housing capital, they are not permitted to deduct maintenance and repair expenditures, nor do they receive a depreciation allowance, but they are permitted to deduct mortgage interest payments and property taxes. The net effect, which can be demonstrated with the present value model described above, is to raise the after-tax cost of rental housing capital relative to owner-occupied capital.

Tax expenditures arising from departures from these principles can be very large. The largest housing ‘programme’ in the world is, in fact, the US tax code. Recent estimates of the size of these annual tax expenditures vary from $60bn to $200bn; and while most analyses show that the recent tax reform in the USA has reduced the implicit subsidy, they remain large.

A fable for our times. Once upon a time there was a country named Bankrupcia with a budget deficit of $150bn and a trade deficit of about the same size, so big that only 10 countries out of 140 had total government budgets larger than the country’s budget deficit, and only six had total trade (exports and imports) larger than this unfortunate country’s trade deficit.

"Woe is us", said Bankrupcia’s leaders; “how did we get ourselves into this pickle?” The wizened old economist spoke up. "What the hell did you expect, simultaneously cutting taxes, increasing defence spending and cutting needs-based social programmes while letting social entitlements run unchecked?" But we reformed taxes, we
URBAN HOUSING

didn't cut them", muttered the leaders, somewhat defensively, "and we had the three witches, Gramm, Rudman and Hollings cast a spell to make the deficit go away". "You're a little old to believe in witches and spells, and if you did believe, this experience should teach you otherwise. And as for tax reform, you left quite a few loopholes; cutting rates is revenue-neutral only if you broaden the base, and you left loopholes I could drive a truck through. Amongst other things, tax expenditures on housing are still running at around $70bn per year, and closing and merging insolvent housing finance institutions will cost $150-200bn over the next 5 years or so".

And the wizened economist patiently, as was his wont, ran through some alternatives to the present position. Firstly he refreshed his audience's memory about how budget deficit drives up interest rates, and hence the value of the country's currency, decreasing the local cost of imports and increasing the foreign cost of the country's exports, thereby increasing the trade deficit as well. And he spun his own tale, of eliminating tax expenditures for housing, closing up the deficits as rapidly and hence as cheaply as possible, and tightening regulation, increasing capital requirements and privatising deposit insurance so that such a thing would never happen again. And he noted that the resultant shift in the budget deficit would not only improve the trade deficit, as noted, but that the fall in interest rates and in the value of the dollar would combine to greatly ease the debt burden of the countries to the south and the east which had managed to get themselves in even worse pickles; growth would resume if these countries took advantage of the respite from debt fatigue to continue reforming their own economies.

"Very interesting", said the leaders when the economist finished his tale, "but politically infeasible". And they threw the economist to the waiting lobbyists from various sinister institutions, and he was never heard from again.

Of course the above is a fable, so it is

exaggerated, but not by much.

Privatisation of Public Housing

A wide range of traditional municipal services have been privatised by some municipalities. In many cases, private provision for these services had gone on un heralded for some time before the idea's recent general popularity. Examples of services include water; sanitation; public housing; solid waste collection; electricity/energy; police, fire and other public safety functions; education (which is not a municipal service in most LDCs); transport, and some personnel and administrative functions, e.g. pensions. Details and examples can be found in Roth (1987), among others.

Three kinds of issues have been neglected in the literature. Firstly, when should services be privatised, or, more precisely, should a change be made in the manner of provision? Secondly, what concomitant regulatory changes are required for the new delivery system? Thirdly, how can the privatisation or other change be implemented? These issues are illustrated using the example of publicly provided housing.

Decision rules: when to privatise or not. In most cases the public or private provision of a service can be separated from the "publicness" of that good or service. Public provision of the private sector is often handled externally, monopoly power and "market failures" of various kinds as well or better than public provision.

The criterion for efficient provision of a good or service is the present value of the cost of providing the optimal level of services publicly versus the present value of the costs of doing so privately. Note that here costs are broadly defined to include the costs of regulation or incentives when required to ensure optimal output and pricing if unregulated private markets would fail for any of the reasons described above. Social goods can be privatised and regulated. Regulation can ensure or even improve equity; note that in many cases the public sector has not always met expectations about serving the poor.

The simplest model assumes that some public agent knows when private markets diverge from the optimal pricing, output and delivery of a service, and by how much. Under many conditions the market collectively processes so much information that even the best trained and organised public agents cannot perform this function. But private markets are often imperfectly informed as well. In most practical situations a judgement must be made about who could make the best decision under limited information for all agents, public and private. In any case it will be demonstrated that there are ways to organise that process, say, distributional goals without impeding efficient information processing through prices.

Consider the following simple example, of privatising publicly-owned housing. Consider a scheme which offers tenants a choice of purchasing their unit or remaining in the public system. In the simplest case the tenant will consider the sales price of the unit with the present value of expected future rents.

Assuming that the public authority would provide maintenance over the life of the unit that would cost the tenant $C_p$ in each period, the tenant compares:

$$SP + \sum_{t=1}^{\infty} \frac{\Sigma C_p/(1+r)^t}{(1+r)^t} = \sum_{t=1}^{\infty} \frac{\Sigma R/(1+r)^t}{(1+r)^t}$$

where SP is sales price, R is the expected rent at each time t, and r is the rate of discount. The local authority compares the selling price to its net income:

$$SP = \sum_{t=1}^{\infty} \Sigma (R - C_p)/(1+r)^t$$

where $C_p$, the expected maintenance cost at time t, is the moment assumed to be the same for public authority and tenant. Note that the original cost of the unit does not
enter because it is a sunk cost.

Logically there are four possible outcomes: (1) the public authority wants to sell and the tenant wants to buy; (2) the public authority wants to hold the unit and the tenant wants to remain a renter; (3) the authority wants to hold the unit but the tenant wants to buy; and (4) the authority wants to sell but the tenant does not want to buy.

Cases (1) and (2) are straightforward. In case (3) there is a conflict—but not under the ‘right to buy’. In case (4) there is another conflict which can be resolved with an appropriate price discount, up to the level where it is still cost-effective for the authority to sell.

What are the likely outcomes? In many of our borrowing countries rents do not even cover variable costs, so local authorities should want to sell. But rents which are so low are also an inducement for tenants to remain tenants. If the authority, strapped for cash, cuts back on maintenance, tenants may opt for purchase anyway. The simple present value model here can be modified to include maintenance behaviour, transaction costs, financing, affordability constraints and resale. The model becomes complicated enough that it is convenient to build a simple spreadsheet model. Thus, we can develop a simple tool which can be applied to practical situations.

Some authorities will have units which fall into each of the four decision categories, requiring different discounts, etc. With such a model many different examples illustrative of all important categories and permutations can be studied. In the UK context such a model can be used to analyse why 15-20 per cent of the public housing stock has been sold off relatively easily but why much of the remainder is proving difficult to sell.

How to privatise. Some basic questions to ask when considering proposals for privatisation in developing countries include the following.

What are the criteria for deciding which units should be privatised? One suggestion here is to use the simple present value criterion; for most public housing selling it off is much cheaper. Following this kind of analysis on a unit basis, it would be preferable to project the institution’s balance sheet with and without privatisation.

When privatising natural monopolies, or firms which face decreasing returns to scale (such as water authorities), regulation of the resulting private monopoly becomes an issue. Housing is not such an industry. But inappropriate existing regulations could throw up road-blocks to privatisation.

Should units be auctioned? If so, should tenants be given the right of first refusal? While efficient, open auctions are probably politically infeasible. How then will units be appraised and priced? What discounts (if any) will be offered to sitting tenants?

Avoid restrictions on resale. They reduce labour mobility, among other problems.

Should the privatisation be based on the right of the tenant to buy or right of the agency to sell? In the former case, initiative rests with the tenant; in the latter, with the authority. In cases where tenants do not want to buy, should units be sold to non-tenants? Will evictions be necessary/feasible?

How will households finance their purchases? Any discount should be taken up front, rather than in finance, to protect them from large contingent liabilities.

Where units share common land, hallways, etc., how will property rights and maintenance be dealt with? Is some form of condominium ownership required? Will enabling legislation be required?

In cases where the public housing authority maintained infrastructure, who will take this over?

How will asset sales be treated on the budget? Again, the British have shown how to use privatisation to ‘cook the books’ by treating an asset sale as current revenue. Based on the UK experience, if privatisation is based on ‘right to buy’ the worst of the stock will remain in public hands. The 70 per

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### Table 8. Housing and Labour Market Mobility, Poland

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<thead>
<tr>
<th>Description</th>
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<td>Poland’s housing and macro-economic policies have restricted investment in</td>
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<td>housing and urban infrastructure to a level well below other European</td>
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<td>countries. Shortages and queues of 15-20 years for government subsidised</td>
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<td>housing are the result. Shortages of such magnitude cause distortions far</td>
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<td>beyond the housing sector per se. They affect savings and consumption</td>
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<td>behaviour, the real price level and the functioning of labour markets.</td>
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<td>Mayo and Stein (1988) argue that because housing is in particularly short</td>
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<td>supply in areas with the strongest demand for labour, higher wages must be</td>
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<td>paid to compensate workers for moving into an area where housing conditions</td>
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<td>are substandard. Estimates of simple migration models support the</td>
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<td>hypothesis.</td>
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<td>Despite high and costly subsidies, continued shortages are accompanied by</td>
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<td>high prices for units which do trade. Market valuations 50-150 per cent</td>
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<td>higher than costs would be signals to produce more housing in market</td>
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<td>systems, but such a response is impeded by Poland’s regulatory environment.</td>
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<td>Such housing as is built is often inappropriately designed and located.</td>
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<td>Mayo and Stein estimate that shifting investment into appropriate units</td>
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<td>in appropriate locations up to the point where marginal costs and benefits</td>
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<td>were equated would yield a direct economic benefit of at least 40 per cent</td>
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<td>of GNP in present value terms.</td>
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cent of the stock which remains public probably always caused 99 per cent of the problems. This does not necessarily mean that privatisation is not beneficial, but that it is not a panacea.

**Housing and Labour Mobility**

Regional differences in house prices are often cited in the UK as a barrier to mobility (Minford et al., 1987; Hughes and McCormick, 1988; Gordon, 1988). Housing can affect labour mobility in developing countries as well.

A number of studies in developing and developed countries have shown that within cities low-income workers commute shorter distances, given the high travel costs they incur and the fact that they usually trade-off consumption of space for accessibility. Anecdotal evidence suggests that in cities like Cairo, where housing markets function very poorly, this relationship breaks down, imposing higher transport costs and adding to congestion.

Across systems of cities, migration studies confirm that households do not move to cities for housing but rather for jobs; however, lack of housing can prevent such moves, increasing unemployment and reducing the productivity of employed labour. Table 8 discusses the example of Poland in some detail.

**OLD LESSONS IN HOUSING MARKET POLICY**

In Mayo et al. (1986), some of the key areas for improvements in housing policy were noted.

(1) Economic development is the most effective way of improving housing conditions in developing countries. To ensure maximum benefits, governments should promote the efficiency of the housing sector, and should avoid policies that cause significant market distortions and produce counter-productive results.

(2) Research suggests that, as development proceeds, housing conditions improve more rapidly than incomes. Housing investment as a share of GNP increases rapidly, as does the fraction of income that people spend on housing. To a considerable degree, what is good for the economy is better for housing.

Governmental activities that deserve emphasis include the following.

(i) The provision of infrastructure with appropriate and affordable standards. The benefits of infrastructure investments are considerable: rates of return to investment are high (often higher than in housing alone), household spending on housing is often spurred, and de facto security of tenure is established for many informal households.

(ii) The recovery of the costs of providing and maintaining infrastructure through efficient systems of taxes and user charges. Otherwise, enormous social and private economic costs result, as with the private provision of water and electricity in Lagos, for example.

(iii) The development of systems of land information and a legal and administrative framework that promotes efficiency in land markets. The costs of developing land are unnecessarily high in most developing countries, largely because of poor land information, backward systems of titling and property rights, and a cumbersome legal and administrative structure.

(iv) The reform of land tenure systems in order to promote private spending on housing. Most cities in developing countries are being built by the informal sector, with houses that are often illegal and with insecure tenure. Research shows that even very poor households place significant monetary premiums on security of tenure and that incentives to improve property are often dramatically increased when tenure is illegal or squatter settlements is legalised.

(5) The development of financial markets and institutions. Development or reform of housing finance institutions should be a part of the overall process of financial reform, thus promoting savings, financial intermediation and the free movement of capital throughout the economy. Housing finance institutions should not be excessively concerned with providing housing subsidies, but should instead be seen as facilitating capital to move into a sector that is growing rapidly as development proceeds.

(6) The critical review of housing subsidies, with the goals of increasing their effectiveness, avoiding unintended side effects, minimising costs to the public and private sectors and distributing benefits fairly in relation to need. In most developing countries, subsidy policies suffer from an almost total lack of strategic planning. The scale, distribution and impact of subsidies are not known.

(7) The pursuit of sites and services and, especially, slum upgrading projects as solutions for the housing problems of low- to moderate-income households. The best of such projects provide appropriate and affordable housing and services, to low and moderate-income groups, recover costs and minimise subsidies, target such subsidies as there are to those in greatest need, have higher economic rates of return and improve the ability to replicate projects on a broad scale.

(8) The promotion of private housing, especially rental housing. The rental sector in most developing country cities is large and growing, usually comprising at least 50 per cent and sometimes as much as 90 per cent of the housing stock. The sector is often harpered, however, by favourable treatment for owner-occupied housing.

Of the policies that governments should avoid, the following deserve special mention:

(i) The creation of unrealistic and costly building codes and zoning regulations. These increase costs, often without corre-
sponding benefits, and may encourage the development of illegal, informal areas.

(2) The destruction of squatter settlements. Slum removal and urban renewal programmes that simply displace the slums to other areas may encourage the development of larger and more militant squatter settlements.

(3) The displacement of private investment by public activities. Murray (1983) found that each 100 new units of publicly subsidised housing in the USA caused a drop of almost 85 units in private construction; other studies indicate that public housing actually has a negative economic rate of return (it is worth less than what it costs to build it).

While this list is based on an earlier one by the author and by Burns and Grebler (1976) and others, how this list should be augmented in the light of the discussion in this paper is discussed in the final section.

Recent Lessons in Subsidy and Incentive Policy

(1) Tax incentives can be potent incentives, but can lead to large revenue losses. Caps on deductions (such as those currently in place in the UK) may mitigate some of the worst effects. Tax credits may be preferable to deductions on equity grounds; alternatively, deductions may be limited to the basic (lowest) tax rate in a progressive tax system.

(2) Subsidies do not always cancel regulatory costs. In particular, demand side subsidies cannot readily counteract regulations, such as land use controls, which reduce housing supply.

(3) Avoid trying to subsidise one tenure group at the expense of another. Horizontal equity measured in the usual ways (e.g. income) will be violated.

(4) Reduce off-budget expenditures for housing. While rarely measured, the effects can be powerful. The USA and Argentina provide examples of the problems such entitlements can cause.

(5) There is no substitute for sound macro-economic policy. As a procyclical industry, housing often bears the brunt of macro-economic instability. No housing finance instrument ever designed will work indefinitely in completely unstable macro-economic environments.

(6) Rent controls are a particularly inefficient means of subsidising housing consumption by some renters at the expense of others. If strong enough and left in place long enough, many tenants themselves will lose more from disequilibrium in consumption than they may gain in lower rents.

(7) Costs and benefits of specific regulations can and should be measured. Strengthen and enforce those whose benefits exceed costs. Remove or modify those that do not achieve this.

Future Research

The fundamental need is for more work on housing market dynamics. Much is known about long-run equilibrium in markets, less about how to get from here to there if there are significant market imperfections. More research is needed on the costs and benefits of specific regulations, especially regarding land use. More can be learned about housing from the existing stock, tenure choice and the relationship between housing and the macro-economy.

NOTES

1. "When I use a word", Humpty Dumpty said, in rather a scornful tone, "it means just what I choose it to mean — neither more nor less". "The question is", said Alice, "whether you can make words mean so many things". "The question is", said Humpty Dumpty, "who is to be master—that's all".


3. See Buckley et al. (1988).

4. When I say our money I mean it inclusively. As many will know, the UK is the Bank's fourth largest shareholder, contributing about 6 per cent of the Bank's capital (the USA contributes about 18 per cent, Japan 9, Germany 7 and France 4: World Bank, 1988). About three-quarters of funds are raised in the major capital markets, with the advantage of member government guarantees, and on-lent at terms which cover the cost of borrowing. The remaining funds are contributed by developed country members and lent on concessionary terms to the poorest countries by the Bank's International Development Association (IDA). Note that IDA and regular World Bank lending is done by the same staff, using the same appraisal criteria. The Bank's International Finance Corporation which makes equity investments in LDC private enterprises is, on the other hand, organisationally separate.

5. Mayo et al. (1986) and Malpezzi and Mayo (1987a) summarise the project and results.


7. See, for example, Deaton (1980).


10. Gittinger (1982) remains the most popular treatment among Bank staff; among many other excellent treatments, see Miah, (1982).


20. Historical data are from Chandler and Fox (1974).


22. A data appendix, contained in two Lotus spreadsheets, is available from the author. The data base includes the cross country numbers used in this report and other data, including much of the World Bank’s World Development Report data.

23. All comparative numbers are in 1985 US dollars unless otherwise stated.


25. Lipton (1977) is the most common reference. Lipton’s analysis is more interesting than some of the more simplistic analyses which followed.

26. Other policies, especially fiscal problems, may be skewed the other direction: see Prudhomme (1986).

27. Yap (1975) and other reviews of migration literature suggest that migration is a response to employment opportunities, and that such wage differentials as exist are largely eaten up by relatively high unemployment, especially for housing, and the transaction cost of entering the urban economy.


29. Malpezzi and Mayo (1987 a, b) and Malpezzi et al. (1988).

30. Goldsmith’s (1987) data are only indicative, because he had limited coverage of developing countries in his sample.

31. Note, for example, that in a market with inelastic supply, increasing the supply of housing finance without tackling other causes of inelasticity would increase housing prices. Also note that these ‘typical’ house price to income ratios, taken from various specific markets in the countries represented, vary considerably across markets within countries; within markets across locations; and over time.

32. Especially since only one developing country, Thailand, rates a ‘1’ on Agarwala’s (1983) interest rate index and has corresponding house price data from Buckley (1989). The presentation of the composite Agarwala index and house prices is also instructive (Figure 21).

33. Much remains to be learned about the magnitudes if not the direction of the interest elasticity of savings in developing countries as well as developed: see Deaton (1989), for example.

34. Of course these simple plots are indicative. Future research should expand the range of countries studied, as well as policies. Studying the cross country relationships between prices and land use regulations, for example, would be quite instructive.

35. In the interests of full disclosure I was a renter in the private market from 1973 to 1985. I have been a landlord (one house split into four apartments) since 1983. It is in a small Pennsylvania town which will not see controls in our lifetime.


41. See, for example, Aaron (1975) and McLure (1979).

42. Details of this exercise are available upon request.

43. For example, by lowering road design standards, saleable land is increased; but surfacing and maintenance costs are also reduced. The latter cost saving is not included.

44. Comparators are housing loans above M$100 000, not subject to government interest rate ceilings on smaller housing loans. In 1987 these loans were typically made at 14-15 per cent for 15 years. In this version a comparator rate of 12 per cent was used, which yields conservative estimates of the finance subsidy.

45. Note that this is the cash flow discounted at a rate other than 10 per cent, because we have this independent information on what is the proper discount rate for this particular flow.

46. Future versions can permit some shifting of costs and benefits, as determined by other parameters entered in the input area. But this simple model of incidence suffices for our purposes.

47. See Blinder (1987), chapter 4.

48. Whether income or consumption is the most appropriate basis for taxation is widely discussed in the literature. Note that most proponents of consumption taxation would also agree with the principles laid out here given that the decision had been made to adopt income as the basis of taxation.

49. For brevity these few paragraphs do not discuss all possible taxes, such as registration taxes or development period taxes, or all costs, or all possible tax subsidies (e.g. investment tax credits). The intention is to illustrate broad principles and motivate more detailed studies. These can be carried out with present value models (de Leeuw and Ozanne, 1981; Breggeman, 1985; Malpezzi, 1988).

50. To be more precise, taxation of income from housing capital is rarely integrated into central government income taxation. The fact that property is widely taxed by local governments suggest that the administrative difficulties in taxing income from capital may be overstated.
51. Except that capital gains are currently taxed at nominal rather than real rates which leads to excess taxation which raises with inflation. Indexing capital gains is part of several tax proposals currently before the US legislature.

52. However, complying with the rules which cancel capital gains liability can impose indirect costs on home-owners.

53. Among many changes, the following stand out. The reduction in marginal tax rates lowers the implicit value of tax subsidy to both home-owners and landlords. The largest rental tax subsidy before reform was the deduction against an accelerated depreciation schedule for any unit (new or used) over a 15-year ‘life’; this has been changed to straight line depreciation over almost twice the life.

54. Of course the twin deficits meant that somewhere surplus countries were sending real goods and services to Bankruptria, in return for Bankruptrian promises to do the same for them at some time in the future. Who the unfortunate are is therefore open to debate.

55. We do not count the large recent literature that says everything with the possible exception of national defence should be privatised, just as we do not count the older literature that says government can do pretty much anything—sets us to do.

56. For this reason heterogeneous goods like land and housing are particularly bad candidates for public provision. Administered pricing of such goods is always problematic.

57. The public health benefits of water and sanitation are often cited as an example.

58. Abstracting from differences in individual and collective maintenance, availability of finance, etc.

59. For example, controls on private rents will discourage investors who are not owneroccupiers. Financial regulations which make it difficult to finance the purchase of existing housing discourage all investors.

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